# STATISTICAL SUMMARIES OF STREAMFLOW DATA IN OREGON Volume 2. Western Oregon

By John Friday and Suzanne J. Miller

U.S. GEOLOGICAL SURVEY
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Prepared in cooperation with Oregon Water Resources Department



## UNITED STATES DEPARTMENT OF THE INTERIOR

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Cover photo: Dog Creek near Idleyld

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#### CONTENTS

Abstract
Introduction
Streamflow records
Statistical summaries
Monthly and annual mean discharges
Magnitude and probability of annual low flows
Magnitude and probability of annual high flows
Magnitude and probability of instantaneous peak flows
Duration table of daily mean flows
References
List of gaging stations, in downstream order
Gaging-station descriptions and statistical tables

## ILLUSTRATIONS

「Plate is in pocket]

Plate 1. Map showing location of streamflow gaging stations in western Oregon.

## METRIC CONVERSION TABLE

To convert inch-pound units  $\lceil$  in this report $\rceil$  to metric units, multiply by the following factors:

Multiply inch-pound unit	Ву	To obtain metric unit
acre	0.4047	hectometer (hm)
acre-foot per year (acre-ft/yr)	0.001233	<pre>cubic hectometers per year   (hm³/yr)</pre>
cubic foot per second (ft³/s and CFS)	0.02832	cubic meter per second (m³/s)
foot (ft)	0.3048	meter (m)
inch per year (in/yr)	25.40	millimeter per year (mm/yr)
mile (mi)	1.609	kilometer (km)
square mile (mi²)	2.590	square kilometer (km²)

#### STATISTICAL SUMMARIES OF STREAMFLOW DATA IN OREGON

#### VOLUME 2. WESTERN OREGON

By John Friday and Suzanne J. Miller

#### **ABSTRACT**

Statistical summaries of streamflow data at 212 stream-gaging sites are presented in this report to aid in appraising the hydrology of river basins in Western Oregon. Records for 21 gaging stations were compiled into separate periods owing to changes in regulation during the period of data collection. The periods before and after regulation are presented for comparison.

A brief station description is given describing the physical and operational features for each gaging station. Following the station description are tables of monthly and annual flow statistics, flood frequency data, low-flow and high-flow frequency data, and flow-duration information.

#### INTRODUCTION

This is the second of two volumes of statistical summaries of streamflow data collected at gaging stations in Oregon. Volume 1 contains data from 123 gaging stations located in the area east of the divide of the Cascade Range. Volume 2 contains data from 212 gaging stations in the remainder of the State. It is anticipated these reports will be updated about every five years.

This report was prepared in cooperation with the Oregon Water Resouces Department (OWRD). The purpose is to provide water-resource managers with a knowledge of streamflow characteristics based on historical data. For the purpose of this report, gaging-station records had to satisfy one of two criteria. The data had to be hydrologically transferable (for use in estimating streamflow in ungaged basins), or it had to be a significant indicator of flow availability. For example, a gage at the outlet of a natural lake would have little hydrologic transferability (due to storage of water in the lake), but the data would be a good indication of low-flow availability as well as flood events.

Stations on canals, reservoirs, or combined-flow stations, were not used in this report. Data for combined-flow stations include diverted flow which may or may not reenter the stream downstream from the gage. A map showing the location of gaging stations used in this report is enclosed in a packet in the back of the book.

#### STREAMFLOW RECORDS

Both active and discontinued gaging stations having a minimum of 10 years of daily-mean discharge values were used in this report. For active stations, the period of record extends to the end of the 1982 water year (ending on September 30). A brief station description showing the physical and operational features of the gaging station precedes the statistical summaries for each station. Except for paragraphs describing revised records and extremes for a specific year, the station descriptions are identical to the last-published version in the annual release "Water Resources Data - Oregon" (U.S. Geological Survey, 1983). A detailed explanation of the manuscript data and a definition of terms is given in that report.

Sometimes the natural flow of a stream may be altered by the construction of a dam, an irrigation diversion, or by the augmentation of flow by transbasin diversions. If this occurs during the operation of a gaging station, the statistical summaries must reflect both natural and altered states of flow, providing there are at least 10 years of data for each state. There are 21 such stations in this report.

#### STATISTICAL SUMMARIES

The tables of statistical data include monthly and annual mean discharges, magnitude and probability of annual low flows, magnitude and probability of annual high flows, magnitude and probability of instantaneous peak flows, and a duration table of daily mean flows. The statistics were generated by using computer programs available from the U.S. Geological Survey's "National Water Data Storage and Retrieval System" (WATSTORE).

#### Monthly and Annual Mean Discharges

This statistical summary is from computer program W4422 by Price and Meeks (1977). The period of record shown in the heading is the first and last water year for which daily-mean discharge values are available, and does not necessarily indicate a continuous period of record (see the PERIOD OF RECORD paragraph in the station description for fragmentary records).

The standard deviation shown in the table is a measure of the variability of flows occurring during a given month during the period of record. The value represents the spread in discharges (from the mean value) that could be expected to occur two-thirds of the time based on the distribution of data during the sampling period. The coefficient of variation is the ratio of the standard deviation to the mean.

The annual mean shown in the table will sometimes vary from the average discharge shown in the manuscript because the annual mean is based only on years for which daily-mean discharge values are available, while the average discharge includes years having estimated monthly values.

## Magnitude and Probability of Annual Low Flows

This summary is from computer program A969 by Meeks (1977). The computation period is based on a climatic year which ends on March 31 thus assuring the low-flow season will be complete within a twelve-month period. The recurrence interval was generally extended to twice the period of record for stations having less than 40 years of record. If 40 or more years of record were available, the recurrence interval was extended to 100 years (a flow having a 1 percent chance of not being exceeded in any given year).

The table shows the amount of flow that probably would not be exceeded, during specified periods, for the indicated recurrence intervals. The recurrence intervals are also shown as nonexceedance probabilities which are expressed as a percent chance of the event not being exceeded in any given year. For example, the low flow during a 30-day period might not be exceeded on the average of once every 50 years, and would have a 2 percent chance of not being exceeded in any given year.

### Magnitude and Probability of Annual High Flows

This summary is also from computer program A969 (Meeks, 1977). The period of record is based on water years having daily-mean discharge data. The recurrence intervals are extended in the same manner as the low-flow frequency. The table shows maximum flows that could be equalled or exceeded, during specified periods, for the indicated recurrence intervals. Occasionally, the values shown for a 1-day period will exceed the instantaneous peaks shown for the same recurrence intervals in the adjacent table. The reason for this is that different periods of record are involved. Quite often peak data are documented outside the period of systematic data collection.

## Magnitude and Probability of Instantaneous Peak Flow

This summary is from computer program J407 by Kirby (1981). The period of record shows the first and last water years for which annual peak flows were documented. The table shows the magnitude of instantaneous peak flows for selected recurrence intervals as computed from a log-Pearson Type III probability distribution of gaging-station data. For stations having less than 25 years of record, the frequency curve was based on a generalized skew coefficient taken from the U.S. Water Resources Council Bulletin 17B (1981). For stations having more than 25 years of data, the skew coefficient was determined by weighing the generalized skew against the actual station skew as recommended by the Council. The skew used for a particular station is shown at the bottom of the table.

Flood-frequency data were not determined at gaging stations immediately downstream from dams and reservoirs. At stations where low-flow statistics are divided into two periods due to the construction of a bypass structure, the flood-frequency data are computed for the entire period of record.

## Duration Table of Daily Mean Flow

This summary is from computer program A969 by Meeks (1977). The period of record indicates the first and last water year where daily-mean values of discharge were available for analysis. The table shows the amount of flow that was equalled or exceeded for the indicated percent of the time.

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	PAGE
Lower Columbia River Basin	
Sandy River Basin	
Sandy River	
Little Zigzag River at Twin Bridges, nr. Rhododendron	11
Salmon River near Government Camp	12
Salmon River below Linney Creek	13
Salmon River at Welches	14
Salmon River above Boulder Creek, near Brightwood	15
Sandy River near Marmot	16
Bull Run River	
Blazed Alder Creek near Rhododendron	17
Bull Run River near Multnomah Falls	18
North Fork Bull Run River near Multnomah Falls	19
Bull Run River below Lake Ben Morrow	20
South Fork Bull Run River	2.0
Cedar Creek near Brightwood	21
Little Sandy River near Bull Run	22
Sandy River below Bull Run River, near Bull Run	23
Willamette River Basin	
Middle Fork Willamette River near Oakridge	24
Hills Creek above Hills Creek Reservoir, near Oakridge .	25
Middle Fork Willamette River ab. Salt Cr., nr. Oakridge	26
Salt Creek near Oakridge	28
Salmon Creek near Oakridge	29
Waldo Lake Outlet near Oakridge	30
North Fork of Middle Fork Willamette River near Oakridge	31
Middle Fork Willamette River below No. Fork, nr. Oakridge.	32
Middle Fork Willamette River near Dexter	34
Fall Creek near Lowell	35
Winberry Creek near Lowell	36
Fall Creek below Winberry Creek, near Fall Creek	37
Little Fall Creek near Fall Creek	39
Middle Fork Willamette River at Jasper	40
Coast Fork Willamette River at London	41
Coast Fork Willamette River below Cottage Grove Dam	42
Row River above Pitcher Creek, near Dorena	43
Row River near Cottage Grove	44
Mosby Creek near Cottage Grove	46
Mosby Creek at mouth, near Cottage Grove	47
Coast Fork Willamette River at Saginaw	48
Coast Fork Willamette River near Goshen	49
Willamette River at Springfield	50
McKenzie River at outlet of Clear Lake	. 51
Smith River ab. Smith River Res., nr. Belknap Springs.	52
McKenzie River bl. Trail Bridge Dam, near Belknap Spgs	53

	PAGE
Lower Columbia River BasinContinued	
Willamette River BasinContinued	
McKenzie River BasinContinued	
McKenzie River at McKenzie Bridge	54
South Fork McKenzie River above Cougar Lake, near	
Rainbow	56
South Fork McKenzie River near Rainbow	57
Blue River below Tidbits Creek, near Blue River	59
Lookout Creek near Blue River	60
Blue River near Blue River	61
Blue River at Blue River	62
McKenzie River near Vida	63 65
Gate Creek at Vida	66
Mohawk River near Springfield	67
McKenzie River near Coburg	68
Long Tom River near Noti	69
Coyote Creek near Crow	70
Amazon Creek at Eugene	71
Long Tom River at Monroe	72
Rock Creek near Philomath	74
Marys River near Philomath	75
Calapooia River at Holley	76
Calapooia River at Albany	77
Willamette River at Albany	78
North Santiam River below Boulder Creek, near Detroit	80
Breitenbush River above Canyon Creek, near Detroit	81
North Santiam River at Niagara	82
Little North Santiam River near Mehama	84
North Santiam River at Mehama	85
South Santiam River below Cascadia	87
Middle Santiam River near Cascadia	88
Quartzville Creek near Cascadia	89
Middle Santiam River near Foster	90
Middle Santiam River at mouth, near Foster	91
South Santiam River	00
Wiley Creek near Foster	92 93
South Santiam River at Waterloo	
Thomas Creek near Scio	95 96
Luckiamute River near Hoskins	98 98
Luckiamute River at Pedee	90 99
Luckiamute River ar redee	100
Rickreall Creek near Dallas	101
Willamette River at Salem	102
South Yamhill River near Willamina	104
Willamina Creek near Willamina	105
Mill Creek near Willamina	106

	PAGE
Lower Columbia River BasinContinued	
Willamette River BasinContinued	
South Yamhill River BasinContinued	
South Yamhill River near Whiteson	107
North Yamhill River near Fairdale	108
Haskins Creek near McMinnville	109
North Yamhill River near Pike	110
North Yamhill River at Pike	111
Willamette River at Wilsonville	112
Molalla River above Pine Creek, near Wilhoit	113
Mollala River near Canby	114
Pudding River	
Silver Creek at Silverton	115
Pudding River near Mount Angel	116
Butte Creek at Monitor	117
Pudding River at Aurora	118
Tualatin River	
Tualatin River near Gaston	119
Scoggins Creek	
Scoggins Creek near Gaston	121
Tualatin River near Dilley	122
Gales Creek near Gales Creek	123
Gales Creek near Forest Grove	124
East Fork Dairy Creek at Mountaindale	125
McKay Creek near North Plains	126
Tualatin River at Farmington	127
Tualatin River at West Linn	128
Clackamas River	
Clackamas River at Big Bottom	130
Oak Grove Fork at Timothy Meadows	131
Oak Grove Fork near Government Camp	132
Oak Grove Fork above powerplant intake	133
Clackamas River above Three Lynx Creek	135
Clackamas River at Estacada	136
Clackamas River near Clackamas	138
Johnson Creek at Sycamore	139
Willamette River at Portland	140
Bear Creek near Svensen	141
Youngs River near Astoria	142
Pacific Slope Basins in Oregon	
Nehalem River Basin	
Nehalem River near Foss	144
Wilson River Basin	4.45
Wilson River near Tillamook	145
Trask River Basin	4.40
Trask River near Tillamook	146
Nestucca River Basin	1 47
Nestucca River near Fairdale	147
Nestucca River near McMinnville	148 149
NESTUCIA RIVER DESCRIPCIÓN CONTRACTOR DESCRIPCIÓN DE DESCRIPCION DE DESCRIPCION DE DESCRIPCION DE DESCRIPCION D	144

	PAGE
Pacific Slope Basins in OregonContinued	
Siletz River Basin	
Siletz River at Siletz	150
Yaquina River Basin	
Yaquina River near Chitwood	151
Mill Creek near Toledo	152
Alsea River Basin	
North Fork Alsea River at Alsea	153
Five Rivers near Fisher	154
Alsea River near Tidewater	155
Drift Creek near Salado	156
Needle Branch near Salado	157
Flynn Creek near Salado	158
Deer Creek near Salado	159
Big Creek Basin	
Big Creek near Roosevelt Beach	160
Siuslaw River Basin	
Siuslaw River	
Lake Creek at Triangle Lake	161
Lake Creek near Deadwood	162
Siuslaw River near Mapleton	163
North Fork Siuslaw River near Minerva	164
Umpqua River Basin	
South Umpqua River Jackson Creek near Tiller	165
	165 166
South Umpqua River at Tiller Elk Creek near Drew	167
Days Creek at Days Creek	168
Cow Creek near Azalea	169
West Fork Cow Creek near Glendale	170
Cow Creek near Riddle	171
South Myrtle Creek near Myrtle Creek	172
North Myrtle Creek near Myrtle Creek	173
Olalla Creek near Tenmile	174
Lookingglass Creek at Brockway	175
South Umpqua River near Brockway	176
Deer Creek near Roseburg	177
North Umpqua River	,,,
Lake Creek near Diamond Lake	178
North Umpqua River at Toketee Falls	179
North Umpqua River ab. Copeland Creek, nr. Toketee Falls	180
Steamboat Creek near Glide	181
North Umpqua River above Rock Creek, near Glide	182
Rock Creek near Glide	183
Little River at Peel	184
North Umpqua River near Glide	185
Sutherlin Creek at Sutherlin	186
North Umpqua River at Winchester	187

	PAGE
Pacific Slope Basins in OregonContinued	
Umpqua River BasinContinued	
Umpqua River	
Calapooya Creek near Oakland	188
Umpqua River near Elkton	189
Elk Creek near Drain	190
Tenmile Creek Basin	
Tenmile Creek near Lakeside	191
Coos River Basin	
West Fork Millicoma River near Allegany	192
Coquille River Basin	
South Fork Coquille River above Panther Creek, nr. Illahe.	193
South Fork Coquille River near Illahe	194
South Fork Coquille River near Powers	195
South Fork Coquille River at Powers	196
Middle Fork Coquille River near Myrtle Point	197
North Fork Coquille River near Fairview	198
North Fork Coquille River near Myrtle Point	199
Rogue River Basin	
Rogue River above Bybee Creek, near Union Creek	200
Rogue River above Prospect	201
Rogue River below Prospect	202
South Fork Rogue River above Imnaha Creek, near Prospect	203
Imnaha Creek near Prospect	204
Middle Fork Rogue River near Prospect	205
Red Blanket Creek near Prospect	206
South Fork Rogue River, South of Prospect	207
Rogue River below South Fork Rogue River, near Prospect	208
South Fork Big Butte Creek near Butte Falls	209
Big Butte Creek near McLeod	210
Rogue River near McLeod	211
Elk Creek near Trail	212
Rogue River at Dodge Bridge, near Eagle Point	213
South Fork Little Butte Creek at Big Elk Ranger Station.	214
South Fork Little Butte Creek near Lakecreek	215
North Fork Little Butte Creek at Fish Lake, near	
Lakecreek	217
North Fork Little Butte Creek near Lakecreek	218
Emigrant Creek near Ashland	219
West Fork Ashland Creek near Ashland	221
East Fork Ashland Creek near Ashland	222
Bear Creek at Medford	223
Rogue River at Raygold, near Central Point	224
Roque River at Grants Pass	225

	PAGE
Pacific Slope Basins in OregonContinued	
Rogue River Basin-Continued	
Applegate River	
Applegate River near Copper	226
Applegate River near Ruch	227
Applegate River near Applegate	228
Powell Creek near Williams	229
Applegate River near Wilderville	230
Slate Creek at Wonder	231
Grave Creek at Pease Bridge, near Placer	232
Rogue River near Agness	233
Illinois River Basin	
East Fork Illinois River near Takilma	234
Sucker Creek near Holland	235
Sucker Creek below Little Grayback Creek, nr. Holland.	236
West Fork Illinois River below Rock Cr., near O'Brien.	237
Illinois River at Kerby	238
Illinois River near Kerby	239
Deer Creek near Dryden	240
Illinois River near Selma	241
Illinois River near Agness	242
Chetco River Basin	
Chetco River near Brookings	243

#### 14131000 LITTLE ZIGZAG RIVER AT TWIN BRIDGES, NEAR RHODODENDRON, OR

LOCATION.--Lat 45°18'50", long 121°48'30", in NW4 sec.15, T.3 S., R.8 E., Clackamas County, Hydrologic Unit 17080001, 0.1 mi upstream from mouth and the upper of Twin Bridges on the Mount Hood Loop Highway and 5.5 mi east of Rhododendron.

DRAINAGE AREA.--3.7 mi², approximately.

PERIOD OF RECORD. -- April 1926 to September 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,905.16 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--10 years (water years 1927-36), 25.3 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 250 ft<sup>3</sup>/s Mar. 31, 1931, gage height not determined, from area-velocity study and comparison with discharge of nearby streams; maximum gage height, 3.5 ft Oct. 7, 1930 (probably backwater from debris); minimum, 15 ft<sup>3</sup>/s Feb. 1-13, 16-18, 1932.

#### STATISTICAL SUMMARIES

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VOVEMBER	20	30	24	2.9	.12	7.8	3						
DECEMBER	19	44	26	7.1	. 27	8.6	7						
ANUARY	20	42	26	6.5	. 25	8.5	14						
EBRUARY	17	31	24	4.5	.18	8.1	30						
1ARCH	23	36	26	4.1	. 16	8.7	60						
APRIL	24	32	29	2.6	•09	9.4	90						
1A Y	24	37	31	4.5	.15	10.1	120						
JUNE	23	42	28	5.3	.19	9.2	183						
JULY	21	30	24	2.6	.11	7.9							
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YEARS, 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RENCE PROB	CORD 1927 CURRENCE ABILITY,	7-36 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	D ON PER  ARGE, IN INTERV EXCEEDANC  5 20%  82 61 49 43	10D OF RE CFS, FOR AL, IN YE CE PROBAE 10 10%	R INDICAT FARS, AND BILITY, !	D27-36  FED RECUF  ANNUAL  N PERCEN  50 2%	100 13
YEARS, 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RE NCE PROB	CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH.  2 50\$  54 45 39 36 34 32 30	ARGE, IN INTERV. EXCEEDAN.  5 20%  82 61 49 43 40 36 34	CFS, FOFAL, IN YECE PROBACTION TO THE TOTAL THE TOTAL TO THE TOTAL TOT	R INDICAT FARS, AND BILITY, !	D27-36  FED RECUF  ANNUAL  N PERCEN  50 2%	100 13
YEARS, 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20% 122 .324	DURATIO	CURRENCE ABILITY, 25 4%	7-36 INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH.  2 50\$  54 45 39 36 34 32 30  OF RECOIL	B2 61 43 40 36 34 ARD 1927-3	100 OF RE  CFS, FOFAL, IN YE  PROBAE  10  107  74  57  48  44  40  37	R INDICAT	D27-36  FED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
YEARS, 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20% 122 .324	DURATIO	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2% DF DAILY N	, IN NT 100 1%  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50\$  54 45 39 36 34 32 30  OF RECOIL	B2 61 43 40 36 34 ARD 1927-3	100 OF RE  CFS, FOFAL, IN YE  PROBAE  10  107  74  57  48  44  40  37	R INDICAT	D27-36  FED RECUF  ANNUAL  N PERCEN  50 2%	100 13

#### 14134000 SALMON RIVER NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°15'55", long 121°43'00", in SEtNWt sec.31, T.3 S., R.9 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank near lower end of Red Top Meadows and 3.0 mi southeast of Government Camp.

DRAINAGE AREA .-- 8.00 mi2.

PERIOD OF RECORD.--May 1910 to May 1912, April 1926 to September 1982. Published as "near Rowe" 1910-12.

GAGE.--Water-stage recorder. Datum of gage is 3,445.53 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1910, nonrecording gage at site 0.2 mi upstream at different datum. Nov. 21, 1910, to May 31, 1912, and Apr. 21, 1926, to Sept. 30, 1933, at site 75 ft upstream from former site at different datums. Oct. 1, 1933, to Sept. 30, 1960, at datum 1.00 ft higher.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--57 years (water years 1911, 1927-82), 44.4 ft<sup>3</sup>/s, 75.37 in/yr, 32,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,300 ft $^3$ /s Dec. 23, 1964, gage height, 4.75 ft, from rating curve extended above 310 ft $^3$ /s, on basis of slope-area measurement of peak flow; minimum, 10 ft $^3$ /s Nov. 27, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1911-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1912-82

монтн	MINIMUM	MAXIMUM (CFS)	MEAN	STAN- DARD DEVIA- TION	CIENT OF	PERCENT OF	PERIOD (CON-		DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
	(CFS)		(CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%		
OCTOBER	14	52	25	8.5	.33	4.8	1	17	14	13	12	11	10		
NOVEMBER	14	90	38	17	.45	7.1	3	17	15	13	12	11	10		
DECEMBER	15	135	50	26	.53	9.4	7	18	15	14	13	12	11		
JANUARY	17	98	43	18	.41	8.2	14	19	16	14	13 -	12	11		
FEBRUARY	15	109	42	18	.43	7.9	30	20	17	15	14	13	12		
MARCH	21	89	39	13	.34	7.3	60	21	18	16	15	14	13		
APRIL	27	82	52	13	.25	9.7	90	23	19	17	16	15	14		
MAY	32	125	76	22	.28	14.3	120	24	20	18	17	16	15		
JUNE	24	164	71	30	.43	13.3	183	30	24	21	19	18	17		
JULY	17	97	43	18	-41	8.2									
AUGUST	16	55	28	8.1	. 29	5.3									
SEPTEMBER	15	37	24	5.0	.21	4.5									
ANNUAL	24	63	44	8.7	. 19	100									

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1911-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1911-82

DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT							PERIOD (CON-		ARGE, IN INTERV EXCEEDANG	AL, ÎN YI	EARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20% 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
183	287	465	608	817	996	1190							
							1	192	297	383	510	620	745
<i>IE</i> I GHTED	SKEW =	.269					3	145	213	270	356	432	520
							7	121	165	198	245	282	32:
							15	106	137	157	182	200	217
							30	95	119	132	147	157	16
							60	84	102	111	119	124	12
							90	75	89	96	103	107	11

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1911-82

	DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCE	NT OF TIM	<b>1</b> E		
5% 10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
102 82	71	63	55	50	42	36	31	27	25	24	22	20	18

13

#### 14134500 SALMON RIVER BELOW LINNEY CREEK, OR

LOCATION.--Lat 45°13'20", long 121°51'40", in SW\ sec.17, T.4 S., R.8 E., Clackamas County, Hydrologic Unit 17080001, 200 ft downstream from Linney Creek, 8 mi southwest of Government Camp, and 9 mi southeast of Welches.

DRAINAGE AREA. -- 54 mi<sup>2</sup>, approximately.

569

451

363

304

264

PERIOD OF RECORD. -- October 1927 to September 1950.

GAGE.--Water-stage recorder. Altitude of gage is 2,500 ft, from topographic map. Prior to Oct. 18; 1934, 25 ft downstream at same datum.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--23 years (water years 1928-50), 205 ft3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s Mar. 31, 1931, gage height, 5.81 ft, site then in use, from rating curve extended above 1,500 ft³/s by logarithmic plotting; minimum, 37 ft³/s Nov. 2, 1936, gage height, 0.22 ft.

#### STATISTICAL SUMMARIES

	MINIMINA	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YE	OR INDICAT ARS, AND A ABILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
CTOBER	53	243	90	47	.52	3.7	1	52	47	45	44		
OVEMBER	47	446	182	120	.66	7.4	3	52	47	46	44		
ECEMBER	79	676	250	162	.65	10.1	7	53	48	46	45		
ANUARY	73	528	212	1 14	.54	8.6	14	55	49	47	46		
EBRUARY	81	395	197	77	.39	8.0	30	57	52	50	48		
IARCH	129	483	248	83	.33	10.1	60	62	55	52	50		
PRIL	119	632	370	119	.32	15.0	90	66	57	54	52		
IAY	125	776	414	181	.44	16.8	120	72	61	57	54		
UNE	87	585	242	131	.54	9.8	183	98	77	69	64		
IULY	64	198	117	39	.33	4.7							
UGUST	50	117	76	18	.23	3.1							
EPTEMBER	53	103	66	11	. 16	2.7							
NNUAL	109												
	TUDE AND	286  PROBABILI D ON PERIO			.22  OUS PEAK I 8-50	100  FLOW	MAG				OF ANNUAL		.OW
MAGNI	TUDE AND BASE	PROBABILI D ON PERIO	TY OF IN OD OF RE CATED RE	STANTANE CORD 192 CURRENCE	OUS PEAK I	FLOW	MAC	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO		ED RECUP	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192  CURRENCE BABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO	ECORD 19  OR INDICAT EARS, AND BILITY, I	28-50 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNI ISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192 CURRENCE	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	ECORD 19  R INDICAT EARS, AND	ED RECUP	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192  CURRENCE BABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FCAL, IN YCE PROBA	EECORD 19	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192 CURRENCE ABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 20%	CFS, FCAL, IN YCE PROBA	RECORD 19 RE INDICAT REARS, AND BILITY, I 25 4%	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192 CURRENCE ABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  1680 1360	CFS, FCAL, IN YCE PROBA-10, 10%	RECORD 19 PR INDICAT FEARS, AND BILITY, I 25 4% 2710 2090	ED RECUF ANNUAL N PERCEN 50 2%	100 15
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192 CURRENCE ABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  1100 924 767	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  1680 1360 1060	CFS, FC AL, IN Y CE PROBA 10 10%	RECORD 19 R INDICAT FEARS, AND BILITY, I 25 4% 2710 2090 1520	ED RECUF ANNUAL N PERCEN 50 2%	100 15
MAGNITION ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192 CURRENCE ABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1100 924 767 658	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  1680 1360 1060 842	CFS, FCAL, IN YCE PROBA  10 10%  2110 1670 1260 937	PR INDICAT PEARS, AND BILITY, I 25 4% 	128-50 TED RECUF ANNUAL N PERCEN 50 2%	100 15
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192 CURRENCE ABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER	100 OF F CFS, FC AL, IN Y CE PROBA 10 10% 2110 1670 1260 937 755	RECORD 19 RECORD	28-50 ED RECUF ANNUAL N PERCEN 50 2%	100 15
MAGNITION ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 192 CURRENCE ABILITY,	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  1100 924 767 658 574 481	D ON PER	CFS, FC AL, IN Y CE PROBA- 10 10%	RECORD 19 RINDICAT REARS, AND BILITY, I	128-50 TED RECUF ANNUAL N PERCEN 50 2%	100 15
MAGNITION ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE	STANTANE CORD 192 CURRENCE IAB IL ITY, 25 4%	OUS PEAK I 8-50 INTERVAL IN PERCEI 50 2%	FLOW  , IN NT 100 18	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1100 924 767 658 574 481 406	ARGE, IN INTERVEXCEEDAN  1680 1360 1060 1060 842 703 580 486	CFS, FCAL, IN YOCE PROBA  2110 1670 1260 937 755 617 517	RECORD 19 RECORD	28-50 ED RECUF ANNUAL N PERCEN 50 2%	100 15
MAGNITION ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE	STANTANE CORD 192 CURRENCE IAB IL ITY, 25 4%	OUS PEAK I 8-50 INTERVAL IN PERCEI 50 2%	FLOW  , IN NT 100 18	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  1100 924 767 658 574 481 406	ARGE, IN INTERVEXCEEDAN  1680 1360 1060 1060 842 703 580 486	CFS, FCAL, IN YOCE PROBA  2110 1670 1260 937 755 617 517	RECORD 19 RINDICAT REARS, AND BILITY, I	28-50 ED RECUF ANNUAL N PERCEN 50 2%	100 13
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE	STANTANE CORD 192 CURRENCE IAB IL ITY, 25 4% 3410	OUS PEAK I 8-50 INTERVAL IN PERCEI 50 2%	FLOW  IN  100  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1100 924 767 658 574 481 406  OF RECO	ARGE, IN INTERVEXCEEDAN  1680 1360 1060 842 703 580 486  RD 1928-	CFS, FCAL, IN NCE PROBA- 10 10%	27 10 2090 1520 1030 797 645 543	28-50 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE

231 179 141 115

92 81 73

#### 14135000 SALMON RIVER AT WELCHES. OR

LOCATION.--Lat 45°19'10", long 121°57'10", in S-1/2 sec.9, T.3 S., R.7 E., Clackamas County, Hydrologic Unit 17080001, 1,200 ft downstream from Cheeney Creek and 0.8 mi southeast of Welches.

DRAINAGE AREA .-- 100 mi2.

1160

932

790

677

495

379

295

221

137

115

77

PERIOD OF RECORD.--September 1913 to September 1914, August 1920 to September 1921, April 1925 to September 1936.

GAGE.--Staff gage. Altitude of gage is 1,350 ft, from topographic map. Aug. 15, 1913, to Sept. 30, 1914, 0.8 mi downstream at different datum. July 26, 1920, to Sept. 15, 1921, Apr. 1, 1925, to May 2, 1931, about 500 ft downstream at various datums.

REMARKS. -- No diversion or regulation above station.

AVERAGE DISCHARGE.--13 years (water years 1914, 1921, 1926-36), 438  $ft^3/s$ .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft<sup>3</sup>/s Mar. 31, 1931, gage height, 9.80 ft, site and datum then in use, from rating curve extended above 4,600 ft<sup>3</sup>/s; minimum, 65 ft<sup>3</sup>/s Dec. 3-6, 1929, Aug. 31 to Sept. 3, 1931.

STATISTICAL SUMMARIES

МС	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1914-36		MAG				OF ANNUAL ECORD 19		OW
	Manifella		MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON-	DISCH	INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	DN-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	80	519	222	140	.63	4.2	1	71	66	64	63		
NOVEMBER	73	1359	481	358	.74	9.2	3	71	66	64	63		
DECEMBER	219	1641	576	384	.67	11.0	7	72	67	65	64		
JANUARY	275	1066	619	263	.42	11.8	14	74	69	67	66		
EBRUARY	183	1113	545	300	.55	10.4	30	78	71	69	68		
1ARCH	468	1322	707	255	•36	13.5	60	86	76	73	71		
APR1L	298	955	697	189	.27	13.3	90	94	80	75	73		
1AY	231	1045	646	276	.43	12.3	120	106	87	81	78		
JUNE	132	1071	377	236	.63	7.2	183	171	130	117	109		
JULY	86	277	159	49	.31	3.0							
AUGUST	75	142	102	18	.18	1.9							
SEPTEMBER	76	296	123	64	.52	2.3							
BEPTEMBER	70												
ANNUAL	284 	589  PROBABILI			.21  EOUS PEAK	100  FLOW	 MA(				OF ANNUAL		
MAGNIT	Z84  FUDE AND BASE  IN CFS,	589 PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 191 ECURRENCE BABILITY,	EOUS PEAK    4-36   INTERVAL   IN PERCE	FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER	CFS, FO	OF ANNUAL ECORD 19 R INDICAT EARS, AND	14-36 ED RECUR	RRENCE
MAGNIT	284  FUDE AND BASE	589 PROBABILI D ON PERI	TY OF IN	NSTANTANE ECORD 191	EOUS PEAK    4-36   INTERVAL   IN PERCE	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, I	ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	284  FUDE AND BASE  IN CFS, AND ANNUA	589  PROBABILI D ON PERI  FOR INDI LL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 191 ECURRENCE BABILITY,	EOUS PEAK 1 14-36 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	ED ON PER	CFS, FO AL, IN Y	ECORD 19 R INDICAT EARS, AND BILITY, I	14-36 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	284  FUDE AND BASE  IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	NSTANTANE ECORD 191 ECURRENCE BABILITY,	EOUS PEAK 1 14-36 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVENCE EXCEEDAN	CFS, FO AL, IN Y CE PROBA	R INDICATE ARS, AND BILITY, I	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	284 FUDE AND BASE IN CFS, NND ANNUA 2 50%	FOR INDI	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	284  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	INTERVENTED INTERV	CFS, FO AL, IN Y CE PROBA	RECORD 19 RINDICAT FEARS, AND BILITY, I 25 4% 7980 5310	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	284  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	FOR INDI	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4220 2930 2060	INTERVEXCEEDAN  5 20%  5700 3960 2850	10 OF R 1 CFS, F0 AL, IN Y CE PROBA 10 10 4580 3370	RECORD 19 R INDICAT EARS, AND BILITY, I	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	284  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	FOR INDI	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  4220 2930 2060 1490	INTERVENTED ON PER INTERVENTE STORY	CFS, FO AL, IN Y CE PROBA 10 10\$ 6700 4580 3370 2270	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 7980 5310 4040 2640	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	284  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	FOR INDI	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 2 50% 4220 2930 2060 1490 1150	5700 3960 2850 1970 1410	CFS, F0 AL, IN Y CE PROBA  10 10 4580 3370 2270 1580	R INDICAT EARS, AND BILITY, I 25 4% 7980 5310 4040 2640 1800	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	284  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	FOR INDI	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  4220 2930 2060 1490	INTERVENTED ON PER INTERVENTE STORY	CFS, FO AL, IN Y CE PROBA 10 10\$ 6700 4580 3370 2270	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 7980 5310 4040 2640	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	284  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE 10 10 10 9110 1	STANTANE CORD 191 CURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36  E INTERVAL IN PERCEI  50 2%  OF DAILY I	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4220 2930 2060 1490 1150 915 806	ARGE, IN INTERVEXCEEDAN  5 20	CFS, F0 AL, IN Y CE PROBA  10 10\$ 6700 4580 3370 2270 1580 1240 1050	R INDICAT FARS, AND BILITY, I 25 4% 7980 5310 4040 2640 1800 1400 1180	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	284  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE 10 10 10 9110 1	STANTANE CORD 191 CURRENCE BABILITY, 25 4%	EOUS PEAK I 4-36  E INTERVAL IN PERCEI  50 2%  OF DAILY I	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4220 2930 2060 1490 1150 915 806	ARGE, IN INTERVEXCEEDAN  5 20	CFS, F0 AL, IN Y CE PROBA  10 10\$ 6700 4580 3370 2270 1580 1240 1050	R INDICAT FARS, AND BILITY, I 25 4% 7980 5310 4040 2640 1800 1400 1180	P14-36  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE

#### 14135500 SALMON RIVER ABOVE BOULDER CREEK, NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°21'40", long 122°00'40", in SW\sEt sec.25, T.2 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, on left bank 1.1 mi upstream from Boulder Creek, 1.2 mi south of Brightwood, and 2.0 mi upstream from mouth.

DRAINAGE AREA. -- 106 mi2.

PERIOD OF RECORD. -- August 1936 to September 1952.

GAGE.--Water-stage recorder. Datum of gage is 1,089.2 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--16 years (water years 1937-52) 452 ft<sup>3</sup>/s, 327,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft<sup>3</sup>/s Dec. 14, 1946, gage height, 7.08 ft, from rating curve extended above 4,100 ft<sup>3</sup>/s by logarithmic plotting; minimum, 59 ft<sup>3</sup>/s Nov. 30, Dec. 1, 1936, Sept. 25, 26, 1940.

#### STATISTICAL SUMMARIES

M	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1937-52		MAG				OF ANNUAL ECORD 19		OW
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	ANNUAL NO	DN-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2%	100
OCTOBER	74	582	224	159	•71	4.1	1	81	70	65	61		
10VEMBER	70	1058	527	318	.60	9.7	3	82	71	65	61		-
DECEMBER	175	1666	713	374	•52	13.1	7	83	72	67	63		-
JANUARY	143	1026	518	268	•52	9.5	14	86	75	70	66		_
EBRUARY	253	956	629	218	.35	11.6	30	91	79	74	69		-
MARCH	228	900	572	163	.28	10.5	60	101	86	79	74 -		-
APRIL	228	1064	738	225	.30	13.6	90	111	92	84	78		_
MAY	270	1294	715	292	.41	13.2	120	134	105	92	83		_
JUNE	142	907	399	187	.47	7.3	183	217	156	132	114		_
JULY	94	313	184	59	.32	3.4							
NUGUST	71	161	112	24	.21	2.1							
SEPTEMBER		140	103	21	.20	1.9							
ANNUAL	246	613	452	112	.25	100							
		FOR INDIC	ATED DE										
		L EXCEEDA			INTERVAL		PERIOD		INTERV	AL, İN YI	R INDICAT	ANNUAL	
1.25	2	5	NCE PROB	ABILITY,  25	IN PERCEI	NT 	(CON- SECU-		I NTERV EXCEEDAN	AL, IN YI CE PROBAE	EARS, AND BILITY, I	N PERCEN	IT
1.25 80%			NCE PROB	ABILITY,	IN PERCE	NT	(CON-		INTERV	AL, İN YI	EARS, AND	ANNUAL	IT 10
	2	5 20%	NCE PROB 10 10\$	ABILITY,  25	IN PERCEI	NT 	(CON- SECU- TIVE DAYS)	2 50%	INTERV EXCEEDAN 5 20%	AL, IN YICE PROBAE	EARS, AND BILITY, I 25 4%	N PERCEN 50 2%	IT 10
80 <b>%</b> 3270	2 50% 4780	5 20% 7260	NCE PROB 10 10\$	25 4%	IN PERCEI	NT 	(CON- SECU- TIVE DAYS)	2 50% 3270	INTERVEXCEEDAN 5 20%	AL, IN YICE PROBAR 10 10% 5960	EARS, AND BILITY, I 25 4%	N PERCEN	10
80 <b>%</b> 3270	2 50%	5 20%	NCE PROB 10 10\$	25 4%	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	2 50% 3270 2270	INTERV EXCEEDAN 5 20%  4760 3440	AL, IN YICE PROBAB 10 10% 5960 4490	7760 6240	N PERCEN 50 2%	10
80 <b>%</b> 	2 50% 4780	5 20% 7260	NCE PROB 10 10\$	25 4%	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	2 50% 3270 2270 1690	1 NTERV EXCEEDAN 5 20% 4760 3440 2490	AL, IN YICE PROBAB 10 10\$ 5960 4490 3150	7760 6240 4170	N PERCEN	IT 10
80 <b>%</b> 3270	2 50% 4780	5 20% 7260	NCE PROB 10 10\$	25 4%	IN PERCEI	NT 	(CON- SECU- TIVE DAYS)  1 3 7	2 50% 3270 2270 1690 1290	1 NTERV EXCEEDAN 5 20% 4760 3440 2490 1780	10 10% 5960 4490 3150 2120	25 4% 7760 6240 4170 2560	50 2%	10
80 <b>%</b> 3270	2 50% 4780	5 20% 7260	NCE PROB 10 10\$	25 4%	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	2 50% 3270 2270 1690 1290 1100	1 NTERV EXCEEDAN 5 20% 4760 3440 2490 1780 1420	10 10% 5960 4490 3150 2120 1600	25 4% 7760 6240 4170 2560 1800	N PERCEN	IT 10
80 <b>%</b> 	2 50% 4780	5 20% 7260	NCE PROB 10 10\$	25 4%	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	2 50% 3270 2270 1690 1290	1 NTERV EXCEEDAN 5 20% 4760 3440 2490 1780	10 10% 5960 4490 3150 2120	25 4% 7760 6240 4170 2560	50 2%	IT 10
80 <b>%</b> 3270	2 50% 4780	5 20% 7260	NCE PROB 10 10\$	25 4%	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	2 50% 3270 2270 1690 1290 1100	1 NTERV EXCEEDAN 5 20% 4760 3440 2490 1780 1420	10 10% 5960 4490 3150 2120 1600	25 4% 7760 6240 4170 2560 1800	50 2%	IT 10
80 <b>%</b> 3270	2 50% 4780	5 20% 7260	10 10% 9180 1	25 4% 1900	1N PERCEI	100 1%	(CON- SECU- TIVE DAYS) 	3270 2270 1690 1290 1100 916 834	1 NTERV EXCEEDAN 5 20% 4760 3440 2490 1780 1420 1120 1010	10 10% 5960 4490 3150 2120 1600 1210	7760 6240 4170 2560 1800 1300	50 2%	10
80 <b>%</b> 3270	2 50% 4780	7260 S	10 10 10 10 9180 1	25 4% 1900 N TABLE	IN PERCEI	NT 100 1%   MEAN FLOW	(CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	2 50% 3270 2270 1690 1290 1100 916 834	1 NTERV EXCEEDAN 5 20\$ 4760 3440 2490 1780 1420 1010	5960 4490 2120 1600 1100 5960 4490 2120 1600 1210 1100	7760 6240 4170 2560 1800 1300	50 2%	IT 100
80 <b>%</b> 3270	2 50% 4780	7260 S	10 10 10 10 9180 1	25 4% 1900 N TABLE	IN PERCEI	MEAN FLOW	(CON- SECU- TIVE DAYS) 	2 50% 3270 2270 1690 1290 1100 916 834	1 NTERV EXCEEDAN 5 20\$ 4760 3440 2490 1780 1420 1010	5960 4490 2120 1600 1100 5960 4490 1100 1100	7760 6240 4170 2560 1800 1300	50 2%	

#### 14137000 SANDY RIVER NEAR MARMOT, OR

LOCATION.--Lat 45°23'30", long 122°07'40", in SE± sec.13, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, on right bank 0.7 mi southwest of Marmot, 0.8 mi upstream from Sandy River Dam of Portland General Electric Co., 6.6 mi downstream from Salmon River, and at mile 30.9.

DRAINAGE AREA .-- 262 mi2.

PERIOD OF RECORD.--August 1911 to September 1982. Published as "at Marmot" October 1912 to September 1913. Records for January 1916 to June 1919, published as "below dam, near Marmot," obtained by combining records for Sandy River below dam, near Marmot, with records for Sandy River Canal near Marmot.

GAGE.--Water-stage recorder. Altitude of gage is 730 ft, from river-profile map. Aug. 15, 1911, to Dec. 20, 1915, and July 2, 1919, to Oct. 19, 1933, nonrecording gage at site 1.0 mi upstream at different datum. Oct. 20, 1933, to Sept. 30, 1958, water-stage recorder at site 0.6 mi upstream at different datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--71 years, 1,368 ft<sup>3</sup>/s, 70.91 in/yr, 991,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.05 ft, from rating curve extended above 7,000 ft<sup>3</sup>/s; minimum, 195 ft<sup>3</sup>/s Nov. 27, 28, 1952.

#### STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN INTERVAL EXCEEDAN	, IN YEA	RS, AND	ANNUAL N	<b>⊃N-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	260	2168	665	400	.60	4.1	1	290	252	234	220	205	196
NOVEMBER	236	3699	1558	897	.58	9.5	3	295	255	237	222	207	197
DECEMBER	445	6278	2129	1189	•56	13.0	7	304	262	242	227	210	200
JANUARY	498	4752	2028	1016	.50	12.4	14	317	273	252	236	218	207
FEBRUARY	464	4686	1834	825	.45	11.2	30	337	289	267	249	231	219
MARCH	631	3983	1645	574	.35	10.0	60	373	314	288	267	247	234
APRIL	658	3134	1900	502	.26	11.6	90	409	340	310	287	263	249
4AY_	744	3443	1878	628	.33	11.4	120	466	380	344	318	292	276
JUNE	496	3457	1257	580	.46	7.7	183	682	537	477	434	392	368
JULY	356	1385	654	192	. 29	4.0							
AUGUST SEPTEMBER	268 265	663 1056	435 427	85 158	.20 .37	2.7 2.6							
ANNUAL	766	1933	1363	273	.20	100							

DISCHARGE YEARS,		S, FOR IN					PERIOD (CON-	DISC	INTER	VAL, ÎN	OR INDICA YEARS, AI ABILITY,	ND ANNUA	L
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
9120	14200	21900	27300	34400	39800	45300							
							1	10500	15600	19000	23500	26800	30200
WEIGHTE	D SKEW =	123					3	7750	11300	13900	17200	19800	22500
							7	5680	7900	9360	11200	12500	13800
							15	4260	5650	6510	7530	8260	8950
							30	3370	4330	4920	5630	6130	6610
							60	2720	3380	3780	4250	4570	4870
							90	2440	2970	3270	3610	3840	4050

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30\$	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
3570	2700	2250	1960	1740	1550	1240	997	793	597	520	456	404	358	310

17

#### 14138800 BLAZED ALDER CREEK NEAR RHODODENDRON, OR

LOCATION.--Lat 45°27'10", long 121°53'25", in NW4SE4 sec.25, T.1 S., R.7 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 600 ft below the confluence of Bedrock and Hickman Creeks and 8.6 mi north of Rhododendron.

DRAINAGE AREA. -- 8.17 mi2.

PERIOD OF RECORD. -- October 1963 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 59.8 ft<sup>3</sup>/s, 99.40 in/yr, 43,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610  $ft^3/s$  Dec. 22, 1964, gage height, 8.25 ft, from rating curve extended above 330  $ft^3/s$ , on basis of slope-area measurement of peak flow; minimum, 1.5  $ft^3/s$  Sept. 5-10, 28, 29, 1967.

#### STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	J	NTERVAL,	IN YEAR	R INDICATI RS, AND AI BILITY, II	NNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	2.4	83	30	23	•75	4.2	1	2.2	1.8	1.6	1.5		
NOVEMBER	15	177	79	46	. 58	10.9	3	2.3	1.8	1.6	1.6		
DECEMBER	23	288	122	71	.59	17.0	7	2.4	1.9	1.7	1.6		
JANUARY	23	207	113	57	• 50	15.7	14	2.6	2.0	1.8	1.7		
EBRUARY	18	183	80	46	• 57	11.2	30	3.1	2.3	2.0	1.9		
MARCH	29	167	60	31	.51	8.4	60	4.3	2.9	2.5	2.2		
APRIL	35	109	74	24	. 32	10.2	90	6.9	4.3	3.4	2.8		
1AY	38	165	85	37	.43	11.9	120	10	6.7	5.3	4.4		
JUNE	13	115	45	30	.66	6.2	183	23	16	13	11		
JULY	4.0	24	11	5.5	. 49	1.6							
AUGUST	2.4	28	6.7	6.2	.92	.9							
SEPTEMBER	2.4	36	13	10	.81	1.8							
ANNUAL	34	88	60	13	.22	100							
	BASE	PROBABILI D ON PERIO	OD OF REC	CORD 1964	<b>1-</b> 82		MAG	BASED	ON PERI	OD OF RE	F ANNUAL	54-82 	
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDICAL EXCEEDA	OD OF REC	CORD 1964 CURRENCE ABILITY,	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RE  CFS, FOR L, IN YE		54-82  ED RECUR ANNUAL	 RENCE
) I SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF REC	CORD 1964	1-82 INTERVAL IN PERCEI	. IN	PERIOD	BASED DISCHA	ON PERI	OD OF RE  CFS, FOR L, IN YE	CORD 196	54-82  ED RECUR ANNUAL	 RENCE
) SCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIO	OD OF REC	CORD 1964 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASED DISCHA E:	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 196 INDICATE ARS, AND ILITY, IN	54-82 ED RECUR ANNUAL I PERCEN 50	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF REC	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASED DISCHA E:	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 196 INDICATE ARS, AND ILITY, IN	54-82 ED RECUR ANNUAL I PERCEN 50	T 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF REC	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E: 2 50%	ON PERIOR ON PER	OD OF RE	INDICATE ARS, AND	54-82 ED RECUR ANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIAL EXCEEDA	OD OF REC	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI	OD OF RECES, FOR IN YEE PROBAB	INDICATE ARS, AND CILITY, IN	54-82 ED RECUR ANNUAL PERCEN 50 2%	T 100
DI SCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIAL EXCEEDA	OD OF REC	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  743 498	ON PERIOR OF THE	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	25 4% 1460 1030	54-82 ED RECUR ANNUAL N PERCEN 50 2%	T 100
DI SCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIAL EXCEEDA	OD OF REC	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED DISCHA E 2 50% 743 498 359	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	INDICATE ARS, AND ILLITY, IN 25 4% 1460 1030 676	54-82 ED RECUR ANNUAL PERCEN 50 2%	T 100
DI SCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIAL EXCEEDA	OD OF REC	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E: 2 50% 743 498 359 245	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10% 1250 856 582 379	INDICATE ARS, AND ILLITY, IN 25 44 1460 1030 676 438	54-82 ED RECUR ANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIAL EXCEEDA	OD OF REC	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  743  498  359  245  183	ON PERI	OD OF RE 	1460 1030 676 438 317	54-82 ED RECUR ANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIAL EXCEEDA	CATED RECONCE PROBLEM	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50% 743 498 359 245 183 140 121	ON PERI- RGE, IN INTERVA XCEEDANC 5 20%	CFS, FOR L, IN YEE PROBAB 10 10% 1250 856 582 379 273 201 172	1460 1030 676 438 317 231	54-82 ED RECUR ANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIG	CATED REG	CURRENCE ABILITY,  25 4%  2200	INTERVAL IN PERCEI 50 2%	IEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E  2  50%  743  498  359  245  183  140  121  OF RECORI	ON PERI- RGE, IN INTERVA XCEEDANC  5 20%  1060 713 499 329 238 177 152  D 1964-8:	OD OF RE	1460 1030 676 438 317 231 197	54-82 ED RECUR ANNUAL PERCEN 50 2%	RENCE
1.25 80%	BASE  , IN CFS, AND ANNUA  2  50%	FOR INDIG	CATED REG	CURRENCE ABILITY,  25 4%  2200	INTERVAL IN PERCEI 50 2%	IEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCHA  E  2  50%  743  498  359  245  183  140  121  OF RECORI	ON PERI- RGE, IN INTERVA XCEEDANC  5 20%  1060 713 499 329 238 177 152  D 1964-8:	OD OF RE	1460 1030 676 438 317 231 197	54-82 ED RECUR ANNUAL PERCEN 50 2%	T 100

#### 14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'50", long 122°00'50", near center of sec.12, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 1.2 mi upstream from North Fork, 7.0 mi southeast of Multnomah Falls, and at mile 14.8.

DRAINAGE AREA .-- 47.9 mi<sup>2</sup>.

1420

896

PERIOD OF RECORD.--August 1966 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,080 ft, from topographic map.

REMARKS.--Water stored since 1915 in Bull Run Lake, usable capacity, 12,270 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--16 years, 424  $ft^3/s$ , 120.21 in/yr, 307,200 acre-ft/yr.

691 569 492 433 344

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge,  $8,610 \text{ ft}^3/\text{s}$  Jan. 20, 1972, gage height, 13.22 ft; minimum,  $33 \text{ ft}^3/\text{s}$  Sept. 27, 1967.

#### STATISTICAL SUMMARIES

М	ONTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1967-82		MAG				OF ANNUAL ECORD 19		OW
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	R INDICAT RS, AND A	NNUAL NO	-MC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	53	535	249	155	.62	4.9	1	45	38	35	33		
NOVEMBER	147	1050	534	283	.53	10.5	3	46	39	35	33		
ECEMBER	193	1434	824	343	.42	16.2	7	47	39	36	33		
IANUARY	178	1238	755	376	.50	14.8	14	50	41	37	34		
FEBRUARY	185	1215	632	325	.51	12.4	30	58	46	41	37		
MARCH	236	1120	466	212	.45	9.1	60	72	53	45	40		
PRIL	242	743	483	141	. 29	9.5	90	98	71	59	50		
MAY_	260	885	488	189	. 39	9.6	120	119	90	76	66		
JUNE	114	699	309	172	.56	6.1	183	186	150	134	123		
JULY	54	243	116	48	.42	2.3							
AUGUST	44	231	98	54	-56	1.9							
EPTEMBER	43	294	146	73	. 50	2.9							
ANNUAL MAGNI					.23 	100 	 MA(				OF ANNUAL		
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER	CFS, FO	OF ANNUAL ECORD 19 R INDICAT EARS, AND BILITY, I	67-82 ED RECUF	RRENCE
MAGN1	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 196	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER IARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBAL	ECORD 19 R INDICATEARS, AND BILITY, 1	ED RECUF ANNUAL N PERCEN	RRENCE IT
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER	CFS, FO AL, IN Y CE PROBAL	ECORD 19 R INDICATEARS, AND	67-82 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE IABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBAL 10	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	ED RECUF ANNUAL N PERCEN	RRENCE IT
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE	DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBAL 10 10%	ECORD 19 R INDICATEARS, AND BILITY, 1	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNI SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBAL 10	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNI SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20% 5690 3910	CFS, FO AL, IN Y CE PROBAI 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 6220 4080	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNI SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 4710 3390 2440	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20% 5690 3910 2910	CFS, FO AL, IN Y CE PROBAI 10 10% 6010 4030 3050	R INDICATEARS, AND BILITY, 1 25 4% 6220 4080 3140	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4710 3390 2440 1620	D ON PER ARGE, IN INTERV EXCEEDAN 50% 5690 3910 2910 2030	CFS, FO AL, IN Y CE PROBAL 10 10% 6010 4030 3050 2230	ECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  6220 4080 3140 2440	FED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK I 7-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4710 3390 2440 1620 1220	5 20%	CFS, FO AL, IN Y. CE PROBAL  10 10%  6010 4030 3050 2230 1640	R INDICAT EARS, AND BILITY, 1 25 4% 6220 4080 3140 2440 1770	167-82 TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNI I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB 10 10%	ISTANTANE CORD 196 CURRENCE HABILITY, 25 4%	OUS PEAK I 17-82 INTERVAL IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  4710 3390 2440 1620 1220 962 832	5 20%	CFS, FO AL, IN Y CE PROBAI  10 10%  6010 4030 3050 2230 1640 1300 1120	ECORD 19  R INDICAT EARS, AND BILITY, I  25 4%  6220 4080 3140 2440 1770 1440	167-82 TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNI I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20% 7400 105	TY OF IN OD OF RECOME NOT THE PROBLEM OF THE PROBLE	ISTANTANE CORD 196 CURRENCE ABILITY, 25 4% 8950	OUS PEAK I 7-82  INTERVAL IN PERCEI  50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  4710 3390 2440 1620 1220 962 832  OF RECO	5 20% 5690 3910 2030 1180 1010	CFS, FO AL, IN Y CE PROBAI  10 10%  6010 4030 3050 2230 1640 1300 1120	R INDICATEARS, AND BILITY, 1 25 4% 6220 4080 3140 2440 1770 1440 1240	167-82 TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT

264

207 149 124 100 81 63 51

#### 14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'40", long 122°02'05", near line between SE‡ and SW‡ sec.11, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, on left bank 7.0 mi southeast of Multnomah Falls, and at mouth.

DRAINAGE AREA .-- 8.32 mi2.

239

161

124

104

79

63

50

39

29

24

21

18

16

PERIOD OF RECORD. -- August 1965 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 1,060 ft, from topographic map. Prior to Oct. 1, 1978, at site 700 ft upstream at datum 18.7 ft higher.

REMARKS.--Regulation at times since 1958 by North Fork dam, capacity, about 1,030 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--17 years, 77.3 ft3/s, 126.17 in/yr, 56,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft<sup>3</sup>/s, probably affected by surge from release of water temporarily impounded by landslide upstream from station, Jan. 20, 1972, gage height, 9.89 ft, from floodmark, from rating curve extended above 350 ft<sup>3</sup>/s on basis of estimate of peak flow from slope-area survey; minimum, 9.1 ft<sup>3</sup>/s Oct. 2-14, 1979.

STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICATE RS, AND AI BILITY, II	NNUAL N	)N
НТИОМ	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	16	93	46	26	•56	4.9	1	13	11	10	9.3		
10VEMBER	28	199	97	52	.54	10.5	3	13	11	10	9.3		
DECEMBER	33	285	150	73	.49	16.2	7	13	11	10	9.4		
JANUARY	32	309	145	78	. 54	15.6	14	14	12	11	9.8		
EBRUARY	40	216	111	54	.48	12.0	30	14	12	11	10		
4ARCH	41	200	83	37	. 44	9.0	60	17	14	13	12		
APRIL	50	127	85	23	.27	9.2	90	21	17	15	13		
4A Y	46	137	84	32	. 38	9.0	120	25	20	18	16		
JUNE	18	111	53	28	.52	5.7	183	36	29	25	22		
JULY	14	47	27	9.4	. 35	2.9							
AUGUST	12	35	19	6.1	.32	2.1							
SEPTEMBER	12	54	28	13	.45	3.0							
ANNUAL	46	121	77	20	.26	100							
N. SCHADOS		FOR INDI			INTERVAL, IN PERCEN		PERIOD	DISCH	ARGE, IN	CFS, FO	ECORD 196  R INDICATE EARS, AND BUILTY, IN	ED RECUF	RENCE
YEARS,							(CON-		CHOCKEDINA		C.L.,,,,	N PERCEN	T
YEARS, 1.25	2	 5	10	25		100	SECU-						
YEARS,			10 10%	25 4%	50 1 2%	100 1%		2 50%	5 20%	10 10%	25 4%	N PERCEN 50 2%	100
YEARS, 1.25	2	5 20%	10%				SECU- TIVÉ	2	5	10	25	50	100
YEARS, 4 1.25 80%	2 50% 1140	5 20% 1850	10%	4%			SECU- TIVE DAYS)	2 50% 	5 20% 	10 10% 1520	25 4% 1830	50	100
YEARS, 4 1.25 80%	2 50%	5 20% 1850	10%	4%			SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
YEARS, 4 1.25 80%	2 50% 1140	5 20% 1850	10%	4%			SECU- TIVE DAYS)	2 50% 	5 20% 	10 10% 1520	25 4% 1830	50 2%	100
YEARS, 4 1.25 80%	2 50% 1140	5 20% 1850	10%	4%			SECU- TIVE DAYS) 	2 50%  834 569	20% 20% 1250 799	10 10% 1520 932	25 4% 1830 1080	50 2%	100
YEARS, 4 1.25 80%	2 50% 1140	5 20% 1850	10%	4%			SECU- TIVE DAYS) 	2 50%  834 569 413	5 20% 1250 799 570	10 10% 1520 932 656	25 4% 1830 1080 748	50 2%	100
YEARS, 4 1.25 80%	2 50% 1140	5 20% 1850	10%	4%			SECU- TIVE DAYS)  1 3 7 15	2 50%  834 569 413 288	20% 20% 1250 799 570 395	10 10% 1520 932 656 458	25 4% 1830 1080 748 530	50 2%	1000
YEARS, 7 1.25 80%	2 50% 1140	5 20% 1850	10%	4%			SECU- TIVE DAYS)  1 3 7 15 30	2 50%  834 569 413 288 219	5 20% 1250 799 570 395 288	10 10% 1520 932 656 458 327	25 4% 1830 1080 748 530 371	50 2%	100

#### 14139500 BULL RUN RIVER BELOW LAKE BEN MORROW, OR

LOCATION.--Lat 45°29'00", long 122°04'50", in SE‡ sec.16, T.1 S., R.6 E., Multhomah County, Hydrologic Unit 17080001, in gatehouse at Bear Creek Dam on Bull Run River, 500 ft downstream from Bear Creek, 1,000 ft upstream from Fivemile Creek, and 8.5 mi northeast of Bull Run

DRAINAGE AREA.--74 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1929 to September 1954. Published as "below Bull Run Reservoir near Bull Run" in 1930 and as "below Bull Run Reservoir" 1931-37.

GAGE.--Water-stage recorder above crest of spillway and scales indicating number of turns outlet needle valves are open. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to Oct. 1, 1934, at site 0.5 mi downstream at different datum.

REMARKS.--Discharge determined by combining discharge through valves near base of dam and discharge over crest of spillway (elevation, 1,036 ft). Leakage at dam is less than 1 ft<sup>3</sup>/s and is disregarded. Flow regulated by Bull Run Lake and Lake Ben Morrow (since 1928); flow from Bull Run Lake is not artificially regulated but reaches river through surface and underground channels.

AVERAGE DISCHARGE.--25 years (water years 1930-54), 582 ft<sup>3</sup>/s, 421,400 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge at dam, 16,100 ft<sup>3</sup>/s, Mar. 31, 1931, elevation, 1,047.40 ft (with 1 valve open 30 turns); no flow Oct. 27, 1939, Oct. 2, 1951, Dec. 11-13, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1930-54 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1931-54

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	RS, AND /	TED RECUR ANNUAL NO IN PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	76	1092	326	291	.89	4.7	1	70	31	18	10	5.0	
NOVEMBER	93	2005	817	513	.63	11.7	3	74	37	23	15	8.5	
DECEMBER	225	2629	1022	544	.53	14.6	7	80	5 <b>5</b>	44	36	29	
JANUARY	163	2581	877	541	.62	12.5	14	87	68	60	55	49	
FEBRUARY	290	1732	826	373	.45	11.8	30	94	77	70	65	60	
MARCH	233	1831	764	320	.42	10.9	60	105	87	80	75	70	
APRIL	211	1263	778	253	.33	11.1	90	113	94	87	82	78	
MAY	233	1284	686	287	.42	9.8	120	136	103	91	83	75	
JUNE	110	1305	443	273	.62	6.3	183	· 240	171	145	127	109	
JULY	90	358	187	71	. 38	2.7							
AUGUST	88	184	132	27	.21	1.9							
SEPTEMBER	. 80	385	137	71	.52	2.0							
ANNUAL	349	784	582	119	.20	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1930-54 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1930-54

		S, FOR IN JAL EXCEE					PERIOD (CON-		INTERV	'AL, ÍN'	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 <b>2%</b>	100 1%
5690	7650	10400	12200	14600	16400								
							1	5710	7860	9480	11800	13600	
VE I GHTED	SKEW =	116					3	4050	5470	6480	7830	8900	
							7	2840	3760	4380	5160	5740	
							15	2080	2690	3050	3470	3760	
							30	1650	2140	2430	2760	2980	
							60	1270	1600	1780	1990	2130	
							90	1140	1380	1500	1640	1720	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-54

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EEDED FOR	INDICATI	ED PERCE	NT OF TI	ME ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
1910	1280	1000	848	733	631	471	349	249	172	147	128	115	103	88

21

#### 14139700 CEDAR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°27'30", long 122°01'50", in NEt sec.26, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 5.8 mi north of Brightwood and at mile 2.5.

DRAINAGE AREA .-- 7.93 mi2.

221

143

112

82

55

33 24 21

18

16

12

PERIOD OF RECORD.--July to November 1964, June 1965 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 1,960 ft, from topographic map.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--17 years, 68.1 ft<sup>3</sup>/s, 116.62 in/yr, 49,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft $^3$ /s Dec. 22, 1964, gage height, 7.20 ft, from rating curve extended above 320 ft $^3$ /s on basis of slope-area measurement of peak flow; minimum, 6.9 ft $^3$ /s Oct. 9-13, 1979.

#### STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	13	87	40	25	.61	4.9	1	9.5	8.2	7.6	7.2		
NOVEMBER	24	166	82	43	- 53	10.1	3	9.6	8.3	7.7	7.2		
DECEMBER	29	232	125	56	.45	15.3	7	9.9	8.4	7.8	7.3		
JANUARY	32	218	124	62	-50	15.1	14	10	8.8	8.2	7.7		
EBRUARY	32	196	101	49	.48	12.3	30	12	9.9	9.1	8.5		
MARCH	39	181	82	34	.41	10.0	60	14	11	11	10		
APRIL	47	130	86	24	.28	10.5	90	17	14	13	12		
YAY	36	136	71	28	. 39	8.6	120	21	17	15	14		
JUNE	19	115	44	25	• 58	5.4	183	31	25	22	20		
JULY	13	37	21	6.7	•31	2.6							
AUGUST	8.7	38	18	7.8		2.2							
SEPTEMBER	12	51	26	13	.49	3.1							
ANNUAL	42	105	68	16	.24	100							
MAGNIT		PROBABILI D ON PERIO				FLOW	MAG				OF ANNUAL ECORD 196		.ow
)ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RECATED RE	CORD 196	6-82 INTERVAL, IN PERCE	, IN NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RECEIVED		56-82  ED RECUF ANNUAL	RENCE
)ISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD 196	6-82 INTERVAL, IN PERCE	. IN	PERIOD (CON- SECU- TIVE	DISCHA	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RECEIVED	ECORD 196 R INDICATE EARS, AND BILITY, IE	56-82 ED RECUF ANNUAL N PERCEN	RENCE
YEARS, A	IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDA	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF RECEIVED	ECORD 196 R INDICATE EARS, AND BILITY, I	56-82 ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, IND ANNUA	FOR INDIC L EXCEEDA	CATED RENCE PROB	CORD 1960 CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI RGE, IN INTERVA XCEEDANC 5 20%	OD OF RECEIVED	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4%	56-82 ED RECUF ANNUAL N PERCEN	RENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI RGE, IN INTERVA XCEEDANC 5 20%	OD OF RECESS, FOR L, IN YEE PROBAE	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4%	56-82 ED RECUF ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  720 504	ON PERI RGE, IN INTERVA XCEEDANC 5 20%	OD OF RECES, FOR L, IN YEE PROBAGE 10 10%	R INDICATE EARS, AND BILITY, IN 25 4%	56-82 ED RECUF ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  E 2 50%  720 504 358	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 912 610 444	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, II  25 4%  1070 670 503	ED RECUF ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  2 50%  720 504 358 246	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 912 610 444 314	OD OF RECEIVED OF	25 1070 670 670 503 395	ED RECUP ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  720 504 358 246 188	912 610 444 314 239	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, II  25  4%  1070 670 503 395 298	ED RECUP ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  2 50%  720 504 358 246	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 912 610 444 314	OD OF RECEIVED OF	25 1070 670 670 503 395	50 RECUF ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1966 CURRENCE ABILITY, 25 4% 2030	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCHA  E  2  50%  720  504  358  246  188  149  130	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 912 610 444 314 239 186 161	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, II  25 4%  1070 670 503 395 298 232	50 RECUF ANNUAL N PERCEN 50 2%	RENCE
PISCHARGE, YEARS, A	BASE IN CFS, IND ANNUA 2 50%	FOR INDIG	DD OF RECEIVED OF REPORT O	CORD 1966 CURRENCE ABILITY, 25 4% 2030	INTERVAL, IN PERCEN 50 2%	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCHA  E  2  50%  720  504  358  246  188  149  130  OF RECOR	912 610 444 239 186 161	OD OF RECEPTION OF	R INDICATE EARS, AND BILITY, II 25 4% 1070 670 503 395 298 232 203	50 RECUF ANNUAL N PERCEN 50 2%	RENCE

#### 14141500 LITTLE SANDY RIVER NEAR BULL RUN. OR

LOCATION.--Lat 45°24'55", long 122°10'20", in NW±NW± sec.10, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 0.25 mi upstream from Portland General Electric Co. dam and tunnel from Sandy River, 3.0 mi east of Bull Run, and at mile 1.95.

DRAINAGE AREA. -- 22.3 mi<sup>2</sup>.

PERIOD OF RECORD.--May to July 1911, October 1911 to March 1912, June 1912 to April 1913, July 1919 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Altitude of gage is 720 ft, from topographic map. May 23, 1911, to Apr. 29, 1913, nonrecording gage at site 0.85 mi downstream at different datum, 0.5 mi downstream from Sandy River diversion tunnel. July 1, 1919, to Sept. 30, 1931, water-stage recorder at site 0.1 mi downstream at different datum. Oct 1, 1931, to Nov. 3, 1967, at site 0.1 mi downstream at datum 712 ft National Geodetic Vertical Datum of 1929. Nov. 4, 1967, to Aug. 8, 1971, water-stage recorder at site 0.1 mi downstream at datum 697.44 ft National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--63 years (water years 1920-82), 146 ft<sup>3</sup>/s, 88.91 in/yr, 105,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft<sup>3</sup>/s Nov. 20, 1921, gage height, 9.18 ft, site and datum then in use, from rating curve extended above 2,200 ft<sup>3</sup>/s; minimum, 8 ft<sup>3</sup>/s Aug. 20, Sept. 16, 17, 1940.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1920-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1921-82

	MINIMUM	MAXIMUM	MEAN.	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICATE RS, AND AN BILITY, IN	INUAL NO	N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	13	271	90	62	•69	5.1	1	14	12	11	9.8	9.0	8.6
NOVEMBER	14	588	206	124	.60	11.7	3	14	12	11	9.8	9.1	8.6
DECEMBER	58	585	253	113	.45	14.4	7	15	12	11	10	9.6	9.2
JANUARY	46	589	241	130	.54	13.7	14	15	13	11	11	10	9.6
FEBRUARY	59	452	208	94	.45	11.8	30	17	14	12	11	11	10
MARCH	50	407	186	69	. 37	10.6	60	20	16	14	13	11	11
APRIL	54	325	198	56	.28	11.3	90	26	19	16	14	12	11
MAY	56	328	170	64	. 37	9.7	120	34	24	20	17	15	13
JUNE	21	268	105	58	•56	6.0	183	61	45	39	34	29	27
JULY	14	93	39	17	.42	2.2							
AUGUST	10	96	24	13	.55	1.4							
SEPTEMBER	12	184	41	36	.88	2.3							
ANNUAL	88	223	,146	30	.20	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1920-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1920-82

DISCHARGE, YEARS, A							PERIOD		IARGE, IN INTERV EXCEEDAN	AL, ÎN Y	EARS, AN	D ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10	25 4%	50 2 <b>%</b>	100
1560	2180	3050	3620	4360	4900	5460				0.00		7700	7700
WEIGHTED	CKEM -	007					1	1460 1010	2030 1380	2420 1640	2930 1980	3320 2250	3720 2530
WEIGHIED	SKEM =	027					3						
							/	710	931	1070	1230	1350	1460
							15	513	665	759	872	952	1030
							30	394	501	566	641	694	744
							60	312	388	435	491	531	569
							90	277	340	379	426	459	491

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1920-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATE	D PERCE	NT OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
443	307	249	212	187	166	129	98	73	48	38	29	23	19	16

#### 14142500 SANDY RIVER BELOW BULL RUN RIVER, NEAR BULL RUN, OR

LOCATION.--Lat 45°27'20", long 122°14'45", in SW½NW½ sec.30, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, on left bank 0.9 mi downstream from Bull Run River, 2.0 mi northwest of Bull Run, and at mile 17.6.

DRAINAGE AREA .-- 440 mi2.

PERIOD OF RECORD.--April 1910 to September 1914, October 1929 to September 1966. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Altitude of gage is 200 ft, from river-profile map. Apr. 27, 1910, to Sept. 30, 1914, staff gage at site 0.8 mi upstream at different datum. Oct. 31, 1929 to June 7, 1963, water-stage recorder at present site and datum.

REMARKS.--Water stored since 1915 in Bull Run Lake. Flow regulated since 1929 by Lake Ben Morrow and since 1961 by Bull Run Reservoir No. 2. Considerable fluctuation caused by Bull Run powerplant of Portland General Electric Co.

AVERAGE DISCHARGE.--41 years (water years 1911-14, 1930-66), 2,356 ft<sup>3</sup>/s, 1,706,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 84,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 22.3 ft; minimum, 45 ft<sup>3</sup>/s Sept. 26, 1962; minimum daily, 63 ft<sup>3</sup>/s Oct. 12, Nov. 9, 1952.

#### STATISTICAL SUMMARIES

YEARS, 1.25 80%		FOR INDIG	NCE PROB	ABBILITY, 25 4%	IN PERCE	100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	2 50% 20300 14900 10500 7840 6220 5010 4540 OF RECO	INTER EXCEEDAN 5 20% 27600 19700 13700 9920 7850 6110 5420	7AL, ÎN 10CE PROB/ 10 10≴ 32600 22900 15700 11100 8750 6710 5870	39100 27000 18200 12300 9750 7360 6320	44100 30000 19900 10400 7790 6600	
1.25 80%	2 50%	L EXCEEDA 5	10 10%	25 4%	1N PERCE 50 2%	100 1% 	(CON- SECU- TIVE DAYS) 	20300 14900 10500 7840 6220 5010 4540	27600 19700 13700 9920 7850 6110 5420	32600 22900 15700 11100 8750 6710 5870	YEARS, AI ABILITY, 25 4% 39100 27000 18200 12300 9750 7360	ND ANNUAL IN PERCEN 50 2% 44100 30000 19900 13000 10400 7790	IT 10
1.25 80%	2 50%	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE DAYS) 	20300 14900 10500 7840 6220 5010	27600 19700 13700 9920 7850 6110	32600 22900 11100 8750 6710	YEARS, AI ABILITY, 25 4% 39100 27000 18200 12300 9750 7360	ND ANNUAL IN PERCEN 50 2% 44100 30000 19900 13000 10400 7790	IT 10
1.25 80%	2 50%	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE DAYS) 	20300 14900 10500 7840 6220	5 20% 27600 19700 13700 9920 7850	10 10% 32600 22900 15700 11100 8750	YEARS, AI ABILITY, 25 4% 39100 27000 18200 12300 9750	ND ANNUAL IN PERCEN 50 2% 44100 30000 19900 13000 10400	IT 10
1.25 80%	2 50%	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE DAYS)  1 3 7	2 50% 20300 14900 10500 7840	5 20% 27600 19700 13700 9920	10 10% 32600 22900 15700 11100	YEARS, AI ABILITY, 25 4% 39100 27000 18200 12300	ND ANNUAL IN PERCEN 50 2% 44100 30000 19900 13000	IT 10
1.25 80%	2 50%	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE DAYS)  1 3 7	20300 14900 10500	1NTER EXCEEDAN 5 20% 27600 19700 13700	10 10% 32600 22900 15700	YEARS, AI ABILITY, 25 4% 39100 27000 18200	ND ANNUAL IN PERCEN 50 2% 44100 30000 19900	IT 10
1.25 80%	2 50%	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE DAYS) 	2 50% 20300 14900	5 20% 27600 19700	10 10% 32600 22900	YEARS, AI ABILITY, 25 4%  39100 27000	ND ANNUAL IN PERCEN 50 2% 44100 30000	IT 10
YEARS, 1.25	AND ANNUA	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE DAYS)	2 50%	INTER EXCEEDAN 5 20%	VAL, IN NCE PROBA 10 10%	YEARS, AI ABILITY, 25 4%	ND ANNUAL IN PERCEN 50 2% 44100	IT 10
YEARS, 1.25	AND ANNUA	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE	2	INTER	/AL, IN NOTE PROBA	YEARS, AI ABILITY, 25	ND ANNUAL IN PERĈEN  50	IT 
YEARS, 1.25	AND ANNUA	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE	2	INTER	/AL, IN NOTE PROBA	YEARS, AI ABILITY, 25	ND ANNUAL IN PERĈEN  50	IT 
YEARS, 1.25	AND ANNUA	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU- TIVE	2	INTER	/AL, IN NOTE PROBA	YEARS, AI ABILITY, 25	ND ANNUAL IN PERĈEN  50	IT 
YEARS, 1.25	AND ANNUA	L EXCEEDA 5	NCE PROB	3ABILITY,  25	IN PERCE	100	(CON- SECU-		I NTER	AL, IN	YEARS, AI ABILITY,	ND ANNUAL IN PERCEN	IT
YEARS,	AND ANNUA	L EXCEEDA	NCE PROB	BABILITY,	IN PERCE	NT	(CON-	DISC	INTER	AL, IN	YEARS, AI	ND ANNUAL	
							DEDLOD	DISC					REN
					INTERVAL	. IN							
MAGNI		PROBABILI D ON PERI			OUS PEAK	FLOW	MA 				OF ANNU	AL HIGH FL 1931-61	.OW
NNUAL	1368	3359	2383	468	.20	100							
EPTEMBER	358	1947	564	314	. 56	2.0							
UGUST	322	713	512	102	.20	1.8							
ULY	408	1756	841	294	.35	2.9							
UNE	570	4887	1933	1034	.53	6.7	183	1060	764	647	565	486	-
AY	1053	5357	3044	1113	.37	10.6	120	620	470	411	370	330	-
PRIL	980	5176	3443	905	.26	12.0	90	508	410	370	342	314	
1ARCH	997	6426	3171	1103	.35	11.1	60	457	380	347	322	297	
EBRUARY	1255	7684	3343	1425	.43	11.7	30	409	351	326	308	291	
ANUARY	992 791	9443 8955	3923 3457	2017 1846	.51 .53	13.7 12.1	7 14	360 385	301 326	273 300	252 280	229 258	-
IOVEMBER ECEMBER	294	6953	3137	1891	.60	10.9	3	297	221	183	154	124	•
CTOBER	326	4086	1296	1006	.78	4.5	1	161	107	87	74	62	-
							DAYS)	50% 	20%	10%	5% 	2 <b>%</b> 	
ONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE	2	5	10	20	50	10
	MINIMUM		MEAN	DARD DEVIA- TION	COEFFI- CIENT OF VARI-	OF ANNUAL	PERIOD (CON- SECU-		INTERVA EXCEEDA	L, IN YE	ARS, AND ABILITY,	ANNUAL NO	)N- NT 
				STAN-				D100	LADCE I	U CEC E	OD INDIC	ATED RECU	DEM
											RECORD		
M 	ONTHLY AN	D ANNUAL	MEAN DIS	SCHARGES	1931-61		MA					AL LOW FLO 1932-61	OW .

#### 14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°35'50", long 122°27'20", in NW\\ NE\\ sec.9, T.23 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi upstream from Windfall Creek, 8.3 mi upstream from Hills Creek Dam, 10.2 mi south of Cakridge, and at mile 240.8.

DRAINAGE AREA. -- 258 mi.

PERIOD OF RECORD. -- October 1958 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,556.83 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Prior to June 21, 1967, at site 0.5 mi upstream at different datums. June 22, 1967, to June 23, 1971, water-stage recorder at same site at datum 5.00 ft higher.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--24 years, 807 ft<sup>3</sup>/s, 42.48 in/yr, 584,700 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-82

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 39,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.96 ft, from floodmark, site and datum then in use, from rating curve extended above 5,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 187 ft<sup>3</sup>/s Sept. 15, 16, 1977.

#### STATISTICAL SUMMARIES

BASED ON PERIOD OF RECORD 1960-82 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-DARD COEFFI-PERCENT PERIOD EXCEEDANCE PROBABILITY, IN PERCENT CLENT OF DEVIA-OF (CON-MINIMUM MAXIMUM ANNIIAL MEAN TION VARI-SECII-MONTH (CFS) (CES) (CFS) (CES) ATION RUNOFF TIVE 2 50 100 50% 10% 20% 5% 2% DAYS) 1% OCTOBER 238 636 329 84 .26 3.4 211 201 NOVEMBER 1805 796 196 296 414 .52 8.2 234 212 203 DECEMBER 271 3922 1253 .69 12.9 237 214 197 862 204 JANUARY 273 2730 1280 690 .54 13.2 14 241 217 207 200 \_\_ **FEBRUARY** 271 2360 1116 497 .45 11.5 30 247 225 217 212 . 49 \_\_ MARCH 432 2842 1009 492 10.4 60 259 236 227 221 \_\_ APRII 518 1475 1005 271 .27 10.4 90 274 250 241 235 \_\_ --MAY 557 1754 1120 340 . 30 11.6 120 292 264 254 248 JUNE 385 1538 794 346 .44 400 338 313 295 8.2 183 253 JULY 740 411 127 .31 4.2 AUGUST 215 415 299 56 . 19 3.1 SEPTEMBER 43 2.9 226 282 ANNUAL 360 1197 807 206 .26 100

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1959-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

DISCHARGE, YEARS, A				RECURRENC ROBABILIT			PERIOD (CON-	DISC	INTER	VAL, İN	OR INDICAT YEARS, AND ABILITY.	ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
5210	8750	15200	20700	29000									
WEIGHTED	CKEM -						1	6780	11600	14900	18900		
WEIGHIEL	SKEW =	.245					2	4890	8160	10500	13500		
							7	3400	5340	6710	8520		
							15	2400	3510	4250	5200		
							30	1910	2620	3090	3690		
							60	1540	2050	2380	2810		
							90	1390	1810	2080	2400		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-82

 		DISC	HARGE, IN	CFS, W	HICH WAS	EQUALED	OR EXCEED	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 2000	1510	1290	1130	989	896	735	592	459	359	322	299	278	259	236

#### WILLAMETTE RIVER BASIN

25

#### 14144900 HILLS CREEK ABOVE HILLS CREEK LAKE, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°40'50", long 122°22'10", in NW±NW± sec.8, T.22 S., R.4 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi downstream from Tufti Creek, 0.7 mi upstream from Hills Creek Lake, 6.5 mi southeast of Oakridge, and at mile 4.1.

DRAINAGE AREA. -- 52.7 mi2.

431

318

263

225

197 171 132 100

69

45

38

32

29

25

22

PERIOD OF RECORD. --October 1958 to September 1981. Prior to October 1971, published as "Hills Creek above Hills Creek Reservoir".

GAGE,--Water-stage recorder. Datum of gage is 1,630.80 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--23 years, 150 ft<sup>3</sup>/s, 38.65 in/yr, 108,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,700 ft $^3$ /s Dec. 22, 1964, gage height, 12.23 ft, from rating curve extended above 1,800 ft $^3$ /s on basis of slope-area measurement of peak flow; minimum, 14 ft $^3$ /s Nov. 1, 1958.

#### STATISTICAL SUMMARIES

										ADII ITV			Ale:
Mi	ONTHLY A	ND ANNUAL	MEAN DIS	SCHARGES	1959-81		MAC	GNITUDE BASE			OF ANNUAL RECORD 11		) <b>11</b>
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	OR INDICA ARS, AND A ABILITY,	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	24	105	44	19	.44	2.4	1	20	18	17	16		
NOVEMBER	28	441	153	102	.67	8.5	3	20	18	17	16		
DECEMBER	23	1001	247	201	.81	13.7	7	20	18	17	16		
JANUARY	27	574	264	164	.62	14.6	14	21	19	18	17		
FEBRUARY	24	425	200	95	.48	11.1	30	22	20	19	19		
MARCH	69	633	198	117	. 59	11.0	60	26	23	22	21		
APRIL	99	308	204	59	.29	11.3	90	28	25	23	23		
MAY	108	367	236	75	.32	13.1	120	34	28	26	24		
JUNE	54	341	145	75	.52	8.0	183	60	44	37	32		
JULY	28	93	53	20	. 38	2.9							
AUGUST	21	61	32	9.6	.30	1.8							
			74		.44	1.7							
SEPTEMBER	21	89	31	14		1.7							
ANNUAL	60 TUDE AND	254  PROBABILI D ON PERI	150 TY OF IN	46 ISTANTANE	.30 OUS PEAK	100	 MAG				OF ANNUAL		 .ow
MAGNI TO STATE OF STATE OF SCHARGE	60 TUDE AND BASE	254 PROBABILI	150 TY OF IN OD OF RE	46  USTANTANE CORD 1956  CURRENCE	.30 OUS PEAK 9-81	100  FLOW , IN	PERIDD	BASE DISCH	D ON PER IARGE, IN INTERV	CFS, FO	RECORD 19	959-81  FED RECUR O ANNUAL	RENCE
MAGNI TO SCHARGE	60 TUDE AND BASE	254 PROBABILI D ON PERI	150 TY OF IN OD OF RE	46  USTANTANE CORD 1956  CURRENCE	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100  FLOW , IN		BASE DISCH	D ON PER IARGE, IN INTERV	CFS, FO	RECORD 19	959-81  FED RECUR O ANNUAL	RENCE
MAGNI	60 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	46 ISTANTANE CORD 1950 CURRENCE BABILITY,	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER IARGE, IN INTERV	CFS, FO	RECORD 19	959-81  FED RECUR O ANNUAL	RENCE
MAGNITAL MAG	60  TUDE AND BASE  , IN CFS, AND ANNUA	254 PROBABILI D ON PERI FOR INDI	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 195 CURRENCE BABILITY,	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIDD (CON- SECU- TIVE	BASE DISCH	D ON PER IARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	RECORD 19 OR INDICAT (EARS, AND BILITY, 1	959-81 FED RECUR O ANNUAL IN PERCEN	RENCE
MAGNI  DISCHARGE YEARS, // 1.25 80%	60  TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	254 PROBABILI D ON PERI FOR INDI	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 1956 CURRENCE BABILITY, 25	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIDD (CON- SECU- TIVE	BASE DISCH	D ON PER IARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	RECORD 19 OR INDICAT (EARS, AND BILITY, 1	959-81 FED RECUR O ANNUAL IN PERCEN	RENCE
MAGNI  DISCHARGE YEARS, // 1.25 80%	FUDE AND BASE IN CFS, AND ANNUA  2 50%	254 PROBABILI D ON PERI FOR INDI	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 1956 CURRENCE BABILITY, 25	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIDD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER	CFS, FO AL, IN Y CE PROBA	RECORD 19 OR INDICAT FEARS, AND BILITY, 1 25 4%	P59-81  FED RECUF  ANNUAL  N PERCEN  50 2%	RENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	FUDE AND BASE IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 1956 CURRENCE BABILITY, 25	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIDD (CON- SECU- TIVE DAYS)	DISCH	D ON PER INTERV EXCEEDAN 20%	CFS, FO AL, IN Y CE PROBA	PRECORD 19 PRECORD 19 PREARS, AND PREARS,	P59-81  FED RECUF  ANNUAL  N PERCEN  50 2%	RENCE
MAGNITON MAG	FUDE AND BASE IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 1956 CURRENCE BABILITY, 25	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20% 2370 1710	CFS, FC AL, IN Y CE PROBA 10 10%	RECORD 19 OR INDICAT FEARS, ANG BILITY, 1 25 4% 4220 3200	959-81 FED RECUF O ANNUAL IN PERCEN 50 2%	RENCE
MAGNITON MAG	FUDE AND BASE IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 1956 CURRENCE BABILITY, 25	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIDD (CON- SECU- TIVE DAYS) 1 3	BASE DISCH	ID ON PER INTERVEXCEEDAN 5 20% 2370 1710 1120	CFS, FO AL, IN Y CE PROBA	RECORD 19 RE INDICATE ARS, AND BILITY, 10 25 4% 4220 3200 2100	P59-81  FED RECUF  ANNUAL  N PERCEN  50  2%	RENCE
MAGNITON MAG	FUDE AND BASE IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 1956 CURRENCE BABILITY, 25	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH  2 50  1410 1020 692 475	2370 1710 1120 712	CFS, FGAL, IN YCE PROBA-10, 10, 3130, 2290, 1500, 917	RECORD 19 RE INDICAT EARS, ANG BILITY, 1 25 4% 4220 3200 2100 1240	P59-81  FED RECUF  ANNUAL  N PERCEN  50  2%	RENCE
MAGNITON MAG	FUDE AND BASE IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	150 TY OF IN OD OF RE CATED RE NCE PROE	46 ISTANTANE CORD 1956 CURRENCE BABILITY, 25	.30 OUS PEAK 9-81 INTERVAL IN PERCE	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER	CFS, FC AL, IN Y CE PROBA	PRECORD 19 PRECORD 19	P59-81  FED RECUF  ANNUAL  N PERCEN  50  2%	RENCE
MAGNITON MAG	FUDE AND BASE IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	150  TY OF IN OD OF RE  CATED RE NCE PROED  10 10 3800	46 ISTANTANE CORD 1950 CURRENCE SABILITY, 25 4%	.30 OUS PEAK 9-81 INTERVAL IN PERCE 50 2%	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  1410 1020 692 475 374 304 270	ARGE, IN INTERVEXCEEDAN  2370 1710 1120 712 522 416 363	CFS, FC AL, IN Y CE PROBA 10 10 10 10 10 10 10 10 10 10 10 10 10	25 4% 4220 3200 2100 1240 838 642	P59-81  TED RECUF  ANNUAL  N PERCEN  50 2%	RENCE
MAGNITON MAG	FUDE AND BASE IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI LEXCEEDA 5 20%	150  TY OF IN OD OF RE  CATED RE NCE PROE  10 10 3800  DURATIO	46 ISTANTANE CORD 195 CURRENCE SABILITY, 25 4% 5380	.30 OUS PEAK 9-81 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	DISCH  2 50%  1410 1020 692 475 374 304 270  OF RECO	2370 17120 1120 712 522 416 363	CFS, FC AL, IN Y CE PROBA  10 10 2290 1500 917 646 507 435	PRECORD 19 PRECORD 19	P59-81  TED RECUF  ANNUAL  N PERCEN  50 2%	RENCE

26 WILLAMETTE RIVER BASIN

#### 14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'20", long 122°26'15", in NW±NE± sec.27, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 90 ft upstream from highway bridge, 0.4 mi upstream from Salt Creek, 1.1 mi downstream from Hills Creek Dam, 2.3 mi southeast of Oakridge, and at mile 231.4.

DRAINAGE AREA .-- 392 mi2.

PERIOD OF RECORD. --October 1913 to September 1914, September 1935 to September 1982. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,208.01 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Oct. 3, 1913, to Sept. 30, 1914, nonrecording gage and Sept. 1, 1935, to Aug. 18, 1960, water-stage recorder at sites 400 ft and
1,000 ft downstream, respectively, at different datum.

REMARKS.--Flow regulated since 1961 by Hills Creek Lake. No diversions above station.

AVERAGE DISCHARGE.--48 years, 1,147 ft3/s, 39.74 in/yr, 831,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 34,000 ft $^3$ /s Dec. 28, 1945, gage height, 12.06 ft, site and datum then in use, from rating curve extended above 13,000 ft $^3$ /s; minimum observed, 0.70 ft $^3$ /s Sept. 8-11, 13, 1961.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1914-60 MAGNITUDE AND PROBABILIT

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-60

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICA RS, AND A BILITY,	ANNUAL NO	ON-
	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	221	1852	464	331	.71	3.4	1	276	242	224	209	193	
NOVEMBER	212	2832	1097	736	.67	8.0	3	278	243	225	210 .	194	
DECEMBER	324	4779	1637	1235	.75	11.9	7	282	246	227	212	195	
JANUARY	260	3904	1734	989	.57	12.7	14	286	250	230	215	197	
FEBRUARY	625	3313	1737	697	.40	12.7	30	295	257	236	220	201	
MARCH	554	2700	1530	533	.35	11.2	60	313	270	247	229	208	
APRIL	614	2751	1615	469	.29	11.8	90	332	282	257	237	215	
MAY	738	2435	1558	490	.31	11.4	120	361	298	269	247	224	
JUNE	344	2000	1146	466	.41	8.4	183	537	395	333	288	244	
JULY	272	884	523	167	•32	3.8							
AUGUST	233	441	343	60	. 17	2.5							
SEPTEMBER	246	389	317	45	.14	2.3							
ANNUAL	629	1735	1138	297	.26	100							

DISCHARGE YEARS,					NCE INTER		PERIOD (CON-	DISC	INTER	VAL, IN	YEARS, AI	ATED RECUIND ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
6780	11800	20900	28200	39200	48400								
							1	9350	16000	21300	29000	35500	
WEIGHTE	D SKEW :	082					3	7130	11300	14400	18800	22300	
							7	5020	7390	9020	11100	12700	
							15	3570	5040	6040	7330	8310	
							30	2900	3880	4470	5140	5610	
							60	2360	3080	3510	4020	4370	
							90	2140	2720	3040	3380	3600	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-60

	_	DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	Ε		
5%	10%	15%	20%	25%	30%	40%	50%	60 <b>%</b>	70%	75%	80%	85%	90%	95%
3020	2290	1940	1680	1470	1300	1020	782	574	426	382	348	322	292	257

# 14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR--Continued STATISTICAL SUMMARIES (AFTER THE COMPLETION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

	MINIMA	мауным	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISCH	INTERVAL	., IN YEA	R INDICA RS, AND BILITY,	ANNUAL NO	ON-
IONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
CTOBER	1.1	1956	1190	437	.37	8.7	1	141	95	79	68		
IOVEMBER	9.4	2940	1614	670	.42	11.8	3	163	108	86	71		
ECEMBER	513	4580	2167	1152	.53	15.8	7	191	124	96	77		
ANUARY	370	5308	1871	1113	.59	13.7	14	233	151	115	90		
EBRUARY	11	4391	927	996	1.07	6.8	30	289	187	143	113		
MARCH	139	1665	631	512	.81	4.6	60	427	266	197	149		
NPR1L	93	1486	769	424	.55	5.6	90	592	356	250	178		
IAY	92	1985	963	490	.51	7.0	120	660	426	321	247		
UNE	108	1983	903	456	.50	6.6	183	820	656	581	525		
IULY	371	1165	599	197	.33	4.4							
UGUST	293	1430	863	317	. 37	6.3							
EPTEMBER	793	2283	1199	325	. 27	8.8							
NNUAL	578	1821	1144	331	.29	100							
ISCHARGE,	BASE	D ON PERIO	OD OF RE	CORD CURRENCE	OUS PEAK F	 , IN		BASE	D ON PER	IOD OF R	OF ANNUAL ECORD 19 R INDICAT	962-82  TED RECUF	
ISCHARGE,	BASE IN CFS, AND ANNUA	D ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL	 , IN	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	ECORD 19	962-82  TED RECUR O ANNUAL	RENCE
SCHARGE, YEARS, A	BASE IN CFS,	FOR INDIA	OD OF RE	CORD CURRENCE	INTERVAL	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	ECORD 19 R INDICATEARS, AND	962-82  TED RECUR O ANNUAL	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICATEARS, AND BILITY, 1 25 4%	962-82 TED RECUF O ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICATE ARS, AND BILITY, 125 4% 9480	962-82 TED RECUF O ANNUAL IN PERCEN 50 2%	100 1%
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6540 6320	CFS, FO AL, IN Y CE PROBA 10 10%	ECORD 19 R INDICATE ARS, AND BILITY, 125 4% 9480 9380	962-82 TED RECUF O ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6540 6320 5790	CFS, FO AL, IN Y CE PROBA  10 10 7840 7650 6990	ECORD 19	962-82 TED RECUF O ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4590 4370 3990 3340	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6540 6320 5790 4900	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 7840 7650 6990 6000	ECORD 19	JED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4590 4370 3990 3340 2660	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6540 6320 5790 4900 3790	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 7840 7650 6990 6000 4630	PARO PARO PARO PARO PARO PARO PARO PARO	JED RECUF J ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASE DISCH 2 50% 4590 4370 3990 3340 2660 2140	D ON PER	TOD OF R  CFS, F0 AL, IN Y CE PROBA  10 10 7650 6990 6000 4630 3630	PARS PARS PARS PARS PARS PARS PARS PARS	JED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4590 4370 3990 3340 2660	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6540 6320 5790 4900 3790	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 7840 7650 6990 6000 4630	PARO PARO PARO PARO PARO PARO PARO PARO	JED RECUF J ANNUAL IN PERCEN 50 2%	100 17
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	CATED RE	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  4590 4370 3990 3340 2660 2140 1930	ARGE, IN INTERVEXCEEDAN 5 20% 6540 6320 5790 4900 3790 3000 2670	TOD OF R  CFS, FO AL, IN Y CE PROBA  10 10%  7840 7650 6990 4630 3630 3200	PARS PARS PARS PARS PARS PARS PARS PARS	JED RECUF J ANNUAL IN PERCEN 50 2%	100 118
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA	CATED RENCE PROB	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  4590 3340 2660 2140 1930  OF RECO	D ON PER	TOD OF R  CFS, FO AL, IN Y CE PROBA  10 10\$ 7840 76590 6990 4630 3630 3200 82	9480 9380 8510 7480 5790 4510 3890	JED RECUF J ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA	CATED RENCE PROB	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEN 50 2% OF DAILY N	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  EXCEEDED FOR	DISCH  2 50%  4590 3340 2660 2140 1930  OF RECO	D ON PER	TOD OF R  CFS, FO AL, IN Y CE PROBA  10 10\$ 7840 76590 6990 4630 3630 3200 82	9480 9380 8510 7480 5790 4510 3890	JED RECUF J ANNUAL IN PERCEN 50 2%	100 118

#### WILLAMETTE RIVER BASIN

#### 14146000 SALT CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'45", long 122°25'35", in SW± sec.23, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, on right bank 0.7 mi upstream from mouth and 2 mi southeast of Oakridge.

DRAINAGE AREA. -- 113 mi2.

PERIOD OF RECORD. -- July 1913 to September 1914, October 1933 to September 1951.

GAGE.--Water-stage recorder. Datum of gage is 1,245.67 ft National Geodetic Vertical Datum of 1929. July 19, 1913, to Sept. 30, 1914, staff gage 0.5 mi downstream at different datum.

REMARKS.--No regulation. Since spring of 1948, there has been a small intermittent, unmeasured diversion around gage to millpond downstream.

AVERAGE DISCHARGE.--19 years (water years 1914, 1934-51), 293 ft<sup>3</sup>/s, 212,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft<sup>3</sup>/s Oct. 29, 1950, gage height, 8.00 ft, from rating curve extended above 2,600 ft<sup>3</sup>/s by logarithmic plotting; minimum, 55 ft<sup>3</sup>/s Jan. 8, 1937, result of freezeup; minimum daily, 66 ft<sup>3</sup>/s Jan. 8, 1937.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1914-51 MAGNITUD

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1935-51

ONTH  CTOBER	(CFS)	MAXIMUM (CFS)		DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-			, IN YEAR DE PROBAE			DN−
			MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
	82	393	150	73	•48	4.3	1	100	83	 75	69		
OVEMBER	94	635	289	159	.55	8.2	3	100	85	78	73		
ECEMBER	116	912	355	208	.59	10.1	7	102	88	81	75		
ANUARY	98	649	350	157	. 45	9.9	14	104	89	82	77		
EBRUARY	169	640	343	115	.34	9.7	30	106	91	84	79		
ARCH	149	486	350	94	. 27	9.9	60	110	95	88	82		
PRIL	186	541	423	99	.23	12.0	90	115	98	90	84		
AY	173	729	483	148	.31	13.7	120	123	102	93	87		
UNE	115	732	376	156	.41	10.7	183	165	124	108	97		
ULY	90	312	173	56	•32	4.9							
UGUST	81	162	118	22	. 19	3.3							
EPTEMBER	86	154	117	20	. 17	3.3							
NNUAL	173	426	293	72	.25	100							
I SCHARGE,	BASEI IN CFS,	ON PERI	OD OF RE	CORD 191	INTERVAL	. IN		BASE	ON PER	ABILITY COLOR OF RE	CORD 19	14-51 ED RECUF	
1.25	2	5 EXCEEDA	10	25	IN PERCEI	100	PERIOD (CON- SECU-			AL, IN YE			1T
80%	50%	20%	10%	4% 	2%	1%	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100

				ROBABILITY			PERIOD (CON-		INTERV	/AL, ÍN Y	EARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
1020	1700	2850	3720	4940									
							1	1440	2270	2850	3610		
WEIGHTED	SKEW =	026					3	1170	1720	2100	2590		
							7	888	1240	1480	1800		
							15	700	922	1060	1240		
							30	612	764	844	928		
							60	538	666	733	803		
							90	490	592	641	689		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-51

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30\$	40%	50%	60%	70%	75%	80%	85%	90%	95%
676	554	490	441	395	356	288	227	181	147	135	124	114	105	95

#### 14146500 SALMON CREEK NEAR OAKRIDGE. OR

LOCATION.--Lat 43°45'45", long 122°22'18", in NEt sec.7, T.21 S., R.4 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 190 ft upstream from Salmon Creek Falls, 0.1 mi upstream from Needle Creek, 4.6 mi east of Oakridge, and at mile 5.84.

DRAINAGE AREA.--117 mi<sup>2</sup>, at measuring cable 0.6 mi downstream from gage.

MONTHLY AND ANNUAL MEAN DISCHARGES 1914-82

PERIOD OF RECORD.--October to November 1909 (gage heights and one discharge measurement only), February 1913 to October 1919, October 1933 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "Kelsey River near Hazeldell" and "Salmon Creek near Hazeldell", 1909.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,462.36 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1914, nonrecording gage at several sites within 4 mi of present site at various datums. Oct. 1, 1914, to Oct. 14, 1919, water-stage recorder at site 1.8 mi downstream at different datum. Nov. 5, 1933, to Oct. 27, 1964, water-stage recorder at site 0.8 mi downstream at datum 40.53 ft lower. Oct. 28, 1964, to Aug. 27, 1965, nonrecording gage at site 0.6 mi downstream at different datum.

REMARKS.--No regulation or diversion above station. All records given herein are for measuring cable site.

AVERAGE DISCHARGE.--55 years (water years 1914-19, 1934-82), 426 ft<sup>3</sup>/s, 49.45 in/yr, 308,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 9.15 ft, from floodmark, site and datum then in use, from rating curve extended above 2,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 63 ft<sup>3</sup>/s Jan. 8, 1937.

#### STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND / BILITY, I	ANNUAL N	0N-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	. TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	107	477	186	70	.37	3.6	1	123	106	98	92	85	81
NOVEMBER	101	955	410	231	.56	8.0	3	124	107	100	94	88	84
DECEMBER	139	1886	621	386	.62	12.1	7	125	109	102	96	91	87
JANUARY	111.	1297	604	305	. 50	11.8	14	128	111	104	98	92	88
FEBRUARY	138	1282	583	237	.41	11.4	30	133	116	108	102	96	92
MARCH	180	1531	537	217	. 40	10.5	60	141	123	115	109	102	98
APRIL	202	1090	601	185	.31	11.7	90	150	130	121	113	106	101
MAY	215	1068	601	193	.32	11.7	120	162	138	127	119	111	106
JUNE	138	1070	436	193	.44	8.5	183	220	174	155	141	127	118
JULY	112	636	230	88	.38	4.5							
AUGUST	96	240	162	34	.21	3.2							
SEPTEMBER	108	201	149	23	. 16	2.9							
ANNUAL	217	681	426	107	•25	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1914-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1914-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1915-82

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	I CFS, FO AL, IN Y ICE PROBA	EARS, AN	D ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
1910	3240	5460	7160	9530	11500	13500							
							1	2590	4140	5290	6870	8130	9460
WE I GHTED	SKEW =	043					3	2050	3160	4000	5200	6170	7230
							7	1550	2260	2780	3480	4030	4620
							15	1180	1610	1900	2260	2530	2800
							30	964	1270	1460	1690	1850	2000
							60	803	1040	1180	1340	1460	1570
							90	731	929	1040	1170	1260	1340

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15% 	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1060	829	706	621	555	499	400	318	243	195	177	163	150	136	121

#### 14147000 WALDO LAKE OUTLET NEAR OAKRIDGE. OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SEtNWt sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank of artificial outlet channel of Waldo Lake forming the headwaters of the North Fork of the Middle Fork of Willamette River, 20 mi east of Oakridge, and at mile 43.5.

DRAINAGE AREA .-- 30.5 mi2, of which about 10.5 mi2 is Waldo Lake.

PERIOD OF RECORD. -- October 1936 to September 1953, October 1969 to September 1982.

GAGE.--Water-stage recorder and modified v-notch weir. Altitude of gage is 5,410 ft, from topographic map. October 1936 to September 1953, at site 120 ft upstream on left bank at same datum.

REMARKS.--At times seiches from Waldo Lake cause rapid changes in stage at gage many times each hour. No regulation. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is sealed off, but there was leakage of 0.51 ft<sup>3</sup>/s past control gates, measured Oct. 1, 1981.

AVERAGE DISCHARGE.--30 years, 34.2 ft<sup>3</sup>/s, 24,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150 ft³/s Jan. 20, 1971, from rating curve extended above 77 ft³/s and adjusted for overbank flow; maximum gage height, 2.98 ft Jan. 2, 1943; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A high-water mark in the channel of a previous high stage in the lake was noted on Sept. 3, 1936, as 3.2 ft gage height, affected by seiche.

#### STATISTICAL SUMMARIES

MONTHLY	AND ANNUAL MEAN	DISCHARGES	1937-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
				DACED ON DEDICE OF DECORD 1070 00

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		RGE, IN ( NTERVAL, XCEEDANCE	IN YEARS	S, AND AN	INUAL NO	N
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	27	4.4	5.8	1.33	1.0	1						
NOVEMBER	0.0	65	12	14	1.16	2.8	3						
DECEMBER	0.0	90	31	27	.86	7.5	7						
JANUARY	1.3	118	47	33	.70	11.4	14						
FEBRUARY	•5	99	57	29	•50	13.7	30						
MARCH	6.9	129	58	27	.47	13.8	60	2.7	.6	.2	. 1	0.0	
APRIL	2.4	100	50	21	.42	12.1	90	3.2	.8	.4	.2	•1	
MAY	10	76	48	15	•31	11.5	120	6.1	2.0	1.0	•5	.2	
JUNE	13	81	50	18	•35	12.1	183	14	6.0	3.4	1.5	1.0	
JULY	3.2	73	37	18	. 49	8.8							
AUGUST	0.0	38	15	11	.69	3.7	NOTE:	LOW-FLOW S	STATIST10	CS UNCERT	TAIN DUE	TO EXCE	SSIVE
SEPTEMBER	0.0	19	6.1	6.1	1.00	1.5		ZERO EVEN	TS.				
ANNUAL	8.0	67	35	15	.42	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1937-82

MAGNITUDE	AND	PROBABIL	LITY	OF	ANNUAL	HIGH	FLOW
BASE	D 01	N PERIOD	OF	RECO	ORD 19:	37-82	

				RECURRENC DBABILIT			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- Tive Days)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
52	78	112	134	161	180								
							1	78	110	129	150	163	-
EIGHTED	SKEW =	293					3	77	109	127	148	161	-
							7	75	106	125	145	159	-
							15	73	102	119	138	151	-
							30	69	96	111	128	138	-
							60	64	88	101	116	126	-
							90	61	84	96	109	118	-

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-82

 		DISCHA	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
90	76	69	61	56	51	42	32	23	14	9.4	6.1	3.0	1.1	0.0

#### WILL AMETTE RIVER BASIN

3 1

95%

90%

152

85%

14147500 NORTH FORK OF MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE. OR

LOCATION.--Lat 43°45'25", long 122°30'15", in SW\ sec.7, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, on left bank 2.5 mi northwest of Oakridge and at mile 1.0.

DRAINAGE AREA.--246 mi<sup>2</sup>, at measuring section 0.5 mi downstream.

5%

2170

10%

1650

15%

1410

20%

1220

25%

1060

30%

929

PERIOD OF RECORD.--October 1909 to March 1916, September 1935 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1912, published as "near Hazeldell."

GAGE.--Water-stage recorder. Datum of gage is 1,029.6 ft National Geodetic Vertical Datum of 1929 (river profile survey). Oct. 1, 1909, to March 31, 1916, water-stage recorder or nonrecording gage at several sites within 0.8 mi of present site at various datums. Sept. 10, 1935, to Oct. 3, 1938, nonrecording gage at present site and datum.

REMARKS.--Slight regulation by Waldo Lake; occasional fluctuations during low-water periods caused by log-ponds above station. No diversions above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--53 years (water years 1910-15, 1936-82), 789 ft<sup>3</sup>/s, 43.56 in/yr, 571,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.14 ft, from floodmark, from rating curve extended above 7,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 22 ft<sup>3</sup>/s Aug. 20, 1966.

#### STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW MONTHLY AND ANNUAL MEAN DISCHARGES 1910-82 BASED ON PERIOD OF RECORD 1911-82 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-COEFFI- PERCENT PERIOD DARD DEVIA-CIENT OF (CON-EXCEEDANCE PROBABILITY, IN PERCENT 0F MINIMIM MAXIMIM MEAN TION VARI-ANNUAL SECU-MONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 20 100 50% 24 DAYS) 20% 10% 5% 1% **OCTOBER** 114 904 2.7 125 100 94 88 85 260 152 .58 108 1 NOVEMBER 119 2287 528 8.9 127 107 103 99 97 845 .62 113 DECEMBER 163 4242 1275 842 13.4 130 115 109 105 101 99 .66 JANUARY 182 2708 1266 107 103 100 713 .56 13.3 134 112 **FEBRUARY** 163 2543 1230 12.9 30 142 107 104 528 .43 125 112 MARCH 330 2970 1115 473 .42 60 154 134 126 119 113 109 11.7 APRIL 373 2072 1151 365 .32 12.1 an 171 146 135 127 119 114 MAY 431 1895 1050 372 . 35 11.0 120 194 161 147 137 127 121 JUNE 1394 201 668 315 .47 7.0 183 315 238 206 183 160 147 JULY 124 650 295 101 .34 3.1 AUGUST 298 .23 98 182 42 1.9 SEPTEMBER 307 35 116 167 .21 1.8 ANNUAL 350 1201 789 204 100 MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1910-82 BASED ON PERIOD OF RECORD 1910-82 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN DISCHARGE, IN CFS, FOR INDICATED RECURRENCE YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL (CON-EXCEEDANCE PROBABILITY, IN PERCENT 1.25 10 25 50 100 SECU-20% 80% 50% 10% 4% 2% 1% TIVE 2 10 25 50 100 10% 49 2% DAYS) 50% 20% 1% 4830 7430 11500 14600 18700 22100 25600 11900 14800 6000 WEIGHTED SKEW = 7380 13300 15100 .074 4720 9210 11600 7 3460 5110 6230 7640 8700 9770 15 2550 3550 4200 5000 5580 6150 30 2070 2760 3200 3720 4090 4450 2480 3370 2850 60 1670 2170 3120 90 1500 1920 2160 2450 2640 2830 DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1910-82

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

50%

60%

386

70%

262

75%

223

80%

40%

730

#### 14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°48'05", long 122°33'35", in SW\ sec.27, T.20 S., R.2 E., Lane County, Hydrologic Unit 17090001, on left bank 0.5 mi downstream from Whitehead Creek, 4.2 mi downstream from North Fork of Middle Fork Willamette River, 7.0 mi northwest of Oakridge, and at mile 220.2.

DRAINAGE AREA .-- 924 mi2.

PERIOD OF RECORD.--March 1911 to September 1912, July 1923 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "near Hazeldell" 1911-12 and as "at Eula" 1923-50.

GAGE.--Water-stage recorder. Datum of gage is 934.76 ft National Geodetlc Vertical Datum of 1929. Mar. 22, 1911, to Sept. 30, 1912, nonrecording gage at site 4.0 mi upstream, just below North Fork at different datum. July 1, 1923, to Aug, 11, 1935, nonrecording gage and Aug. 12, 1935, to Sept. 30, 1950, water-stage recorder at site 4.0 mi downstream at different datum.

REMARKS.--Flow regulated since 1961 by Hills Creek Lake; slight regulation at times by logponds above station. No diversion above station.

AVERAGE DISCHARGE.--60 years, 2,767  $ft^3/s$ , 2,005,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,800 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 18.8 ft, from floodmark, site and datum then in use, from rating curve extended above 39,000 ft<sup>3</sup>/s; minimum, 322 ft<sup>3</sup>/s Aug. 30, 1961, caused by closing outlet gates at Hills Creek Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1861 and prior to beginning of record, 17.0 ft in February 1890 at site used 1923-50, from information by local resident, discharge, about 55,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-60

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1925-60

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICATRS, AND A	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 <b>20%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	541	4185	1095	670	.61	3.3	1	619	531	488	455	420	
NOVEMBER	500	6703	2679	1806	.67	8.2	3	622	533	490	456	421	
DECEMBER	959	11640	3794	2524	.67	11.6	7	632	544	501	468	433	
JANUARY	771	8988	3999	2108	.53	12.2	14	645	553	509	475	438	
FEBRUARY	1352	7859	4264	1799	.42	13.0	30	666	570	525	490	452	
MARCH	1293	8423	3774	1475	.39	11.5	60	709	600	549	510	468	
APRIL	1454	6785	3984	1202	.30	12.1	90	757	629	569	524	476	
MAY	1288	6408	3712	1346	.36	11.3	120	824	671	604	554	503	
JUNE	837	7098	2741	1375	•50	8.4	183	1190	891	770	686	604	
JULY	591	2139	1232	417	.34	3.8							
AUGUST	491	1095	798	163	.20	2.4							
SEPTEMBER	494	1125	752	149	.20	2.3							
ANNUAL	1520	4337	2724	717	. 26	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1912-60 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1912-60

YEARS,			DANCE P		ICE INTER		PERIOD (CON-	DISC	INTER	VAL, ÍN '	YEARS, AI	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4 <b>%</b>	50 <b>2%</b>	100
16200	26700	44100	57400	76000	91000								
							1	22000	34500	43500	55500	64800	
<b>NE</b> 1GHTE	D SKEW =	0.000					3	16500	24300	29800	37000	42500	
							7	11800	16400	19300	23000	25600	
							15	8610	11500	13300	15400	16900	
							30	6830	8830	10000	11400	12400	_
							60	5580	7090	8020	9110	9890	-
							90	5050	6300	7030	7850	8410	-

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-60

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
7180	5600	4740	4100	3600	3190	2500	1910	1410	1040	915	826	751	679	592

#### WILLAMETTE RIVER BASIN

#### 14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR--Continued

STATISTICAL SUMMARIES (AFTER THE COMPLETION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

MONTH	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
	(CFS)	(CFS)	(CFS)	(CFS)		RUNOFF		2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	625	2929	1784	513	.29	5.2	1	808	648	568	504			
NOVEMBER	1466	6263	3260	1374	.42	9.6	3	840	683	604	542			
DECEMBER	1073	13540	5205	3002	.58	15.3	7	884	721	636	568			
JANUARY	874	10120	4871	2343	.48	14.3	14	924	753	663	590			
EBRUARY	710	8093	3264	1738	.53	9.6	30	1000	812	722	652			
1ARCH	1292	7802	2812	1568	.56	8.2	60	1170	962	865	791			
\PRIL	1464	4575	2993	958	.32	8.8	90	1300	1090	994	916			
4AY	1378	5036	3211	1070	.33	9.4	120	1400	1210	1110	1030			
JUNE	1037	4969	2400	1110	.46	7.0	183	1700	1440	1330	1240			
JULY	766	1901	1329	363	. 27	3.9								
AUGUST	700	1753	1354	325	. 24	4.0								
SEPTEMBER	1262	2639	1642	345	.21	4.8								
ANNUAL	1416	4301	2844	779	.27	100			•					
OISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	OUS PEAK I	, IN		BASE	D ON PER	CFS, FO	OF ANNUA RECORD 1	962-82  TED RECU		
) I SCHARGE ,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASE	ARGE, IN	CES, FO	RECORD 1	962-82  TED RECUI D ANNUAL	RRENCE	
) SCHARGE, YEARS, /	BASE IN CFS,	FOR INDIC	OD OF RE	CORD	INTERVAL IN PERCEI	, IN	PERIOD (CON-	BASE	ARGE, IN	CES, FO	RECORD 1  OR INDICA YEARS, AN	962-82  TED RECUI D ANNUAL	RRENCE	
) SCHARGE, YEARS, /	BASE IN CFS, AND ANNUA	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC VAL, IN N ICE PROBA	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%	962-82 TED RECUID ANNUAL IN PERCENTED	RRENCE	
YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 20%	I CFS, FC IAL, IN N ICE PROBA	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  32400	962-82 TED RECUID ANNUAL IN PERCENTED SO 2%	RRENCE	
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERV EXCEEDAN 5 20%	1 CFS, FC (AL, IN ) (CE PROBA- 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  32400 28700	962-82 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE	
YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	1ARGE, IN INTERV EXCEEDAN 5 20% 22600 18500 14300	10 OF F	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4% 32400 28700 21800	962-82 TED RECUID ANNUAL IN PERCENTED SO 2%	RRENCE	
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 14900 12000 9540 7910	HARGE, IN INTERVEXCEEDAN 5 20% 22600 18500 14300 11200	10 OF F	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4% 32400 28700 21800 15700	962-82 TED RECUE D ANNUAL IN PERCEE 50 2%	RRENCE	
YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 14900 12000 9540 7910 6490	HARGE, IN INTERVEXCEEDAN 5 20% 22600 18500 14300 11200 9070	10 10%	DR INDICA YEARS, AN ABILITY,  25 4%  32400 28700 21800 15700 12500	962-82  TED RECUE D ANNUAL IN PERCEE  50 2%	RRENCE	
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 14900 12000 9540 7910 6490 5250	ARGE, IN PER INTERVENCEDAN 5 20% 22600 18500 14300 11200 9070 7370	10 10% 10% 10% 10% 10% 27200 23000 17600 13200 10700 8760	DR INDICA YEARS, AN ABILITY,  25 4%  32400 28700 21800 15700 12500 10500	962-82 TED RECUE D ANNUAL IN PERCEE 50 2%	RRENCE	
YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECORD OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 14900 12000 9540 7910 6490	HARGE, IN INTERVEXCEEDAN 5 20% 22600 18500 14300 11200 9070	10 10%	DR INDICA YEARS, AN ABILITY,  25 4%  32400 28700 21800 15700 12500	962-82 TED RECUE D ANNUAL IN PERCEE 50 2%	RRENCI	
PISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	CATED RENCE PROB	CURRENCE ABBILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 18	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 14900 12000 9540 7910 6490 5250 4730	ARGE, IN INTERVEXCEEDAN  20%  22600 18500 14300 141200 9070 7370 6550	10 CFS, F(AL, IN NCE PROBA 10 10% 27200 27300 17600 17600 17600 17600 7680	DR INDICA YEARS, AN ABILITY,  25 4%  32400 28700 21800 15700 12500 10500	962-82 TED RECUE D ANNUAL IN PERCEE 50 2%	RRENCE	
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RENCE PROB	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	DISCH  2 50%  14900 12000 9540 7910 6490 5250 4730  OF RECC	ARRGE, IN INTERVEXCEEDAN  22600 11200 9070 7370 6550	10 CFS, F(AL, IN ) ICE PROBA	DR INDICA YEARS, AN ABILITY, 25 4% 32400 28700 21800 15700 12500 10500 9030	962-82 TED RECUE D ANNUAL IN PERCEE 50 2%	RRENCE	
PISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RENCE PROB	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2% OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCH  2 50%  14900 12000 9540 7910 6490 5250 4730  OF RECC	ARRGE, IN INTERVEXCEEDAN  22600 11200 9070 7370 6550	10 CFS, F(AL, IN ) ICE PROBA	DR INDICA YEARS, AN ABILITY, 25 4% 32400 28700 21800 15700 12500 10500 9030	962-82 TED RECUE D ANNUAL IN PERCEE 50 2%	RRENCE	

#### 14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR

LOCATION.--Lat 43°56'45", long 122°50'10", in SE‡NW‡ sec.5, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on right bank 0.6 mi upstream from Lost Creek, 2.0 mi northwest of Dexter, 2.6 mi downstream from Dexter Dam, and at mile 201.2.

DRAINAGE AREA .-- 1,001 mi2.

PERIOD OF RECORD.--October 1946 to September 1954 (published as "at Lowell"), June 1955 to September 1982. Monthly discharge only for October 1954 to June 1955, published in WSP 1738.

GAGE.--Water-stage recorder. Datum of gage is 592.30 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Prior to Aug. 23, 1950, nonrecording gage and Aug. 23, 1950, to Sept. 30, 1954, at site 4.0 mi upstream at different datum, and June 9, 1955, to Feb. 18, 1977, at datum 3.00 ft higher.

REMARKS.--Flow regulated since 1953 by Lookout Point Lake, since 1955 by Dexter Lake (re-regulating), and since 1961 by Hills Creek lake.

AVERAGE DISCHARGE.--36 years, 3,158 ft3/s, 2,288,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,600 ft<sup>3</sup>/s Jan. 18, 1953, gage height, 12.46 ft, site and datum then in use, from rating curve extended above 33,000 ft<sup>3</sup>/s; minimum daily, 100 ft<sup>3</sup>/s Nov. 25, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 13.9 ft Dec. 28, 1945, former site and datum.

#### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

	MINIMA	MAVIMINA	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	-AC
НТИОМ	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	1847	5266	3237	688	.21	9.0	1	801	440	292	198		
NOVEMBER	2076	7748	4597	1487	.32	12.7	3	985	697	548	434		
DECEMBER	1231	11300	5785	2848	.49	16.0	7	1100	777	599	463		
JANUARY	1050	13510	5219	2787	•53	14.4	14	1120	794	612	472		
FEBRUARY	668	7634	2713	2137	.79	7.5	30	1170	841	659	518		
MARCH	525	7363	2082	1562	.75	5.8	60	1270	898	720	587		
APRIL	437	4070	1891	1044	.55	5.2	90	1440	1020	835	698		
MAY	526	5088	2366	1283	. 54	6.5	120	1570	1130	947	815		
JUNE	816	4564	2197	1137	.52	6.1	183	1910	1480	1290	1160		
JULY	1088	1944	1556	271	. 17	4.3							
AUGUST	1083	2380	1827	335	.18	5.1							
SEPTEMBER	1405	3932	2671	762	.29	7.4							
ANNUAL	1392	4586	3016	868	.29	100							

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1962-82

DISCHARGE, YEARS, A							PERIOD (CON-	DISC	INTER	VAL, ÎN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20%	10 10%	25 4 <b>%</b>	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
							1	11600	15600	17900	20600		
<b>WE</b> I GHTED	SKEW =						3	11500	15200	17200	19300		
							7	10900	14500	16300	18200		
							15	9430	12500	14100	15900		
							30	7370	10100	11800	14100		
							60	6000	8180	9670	11600		
							90	5390	7250	8430	9870		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1962-82

			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	CEEDED FOR	INDICATED	PERCENT	OF TIM	E		
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
906	50	6200	4610	3980	3700	3410	2680	2080	1660	1410 1	300 1	260	1220	1150	1010

## 14150300 FALL CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°58'15", long 122°38'15", in SWt sec.25, T.18 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.1 mi downstream from North Fork, 8.0 mi northeast of Lowell, and at mile 14.4.

DRAINAGE AREA .-- 118 mi2.

PERIOD OF RECORD. -- August 1963 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 844.42 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 411 ft3/s, 47.30 in/yr, 297,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft<sup>3</sup>/s Jan. 21, 1972, which may have been caused by release from breakup of temporary logjam 12 mi upstream, gage height, 11.84 ft; minimum, 16 ft<sup>3</sup>/s Oct. 3, 4, 1965.

STATISTICAL SUMMARIES

М	ONTHLY A	ND ANNUAL	MEAN DIS	SCHARGES	1964-82		MA	-			OF ANNUAI RECORD 19		)W
	MINIMIM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF		PERIOD (CON- SECU-		INTERVAL	, IN YEA	OR INDICA ARS, AND A	ANNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	31	296	111	75	.68	2.2	1	24	20	18	17		
NOVEMBER	83	1389	519	374	.72	10.5	3	24	20	19	18		
DECEMBER	61	2282	895	540	.60	18.1	7	25	21	20	19		
JANUARY	102	1849	1002	509	.51	20.3	14	26	22	21	20		
FEBRUARY	92	1179	638	288	.45	12.9	30	29	24	22	21		
MARCH	194	1326	622	313	.50	12.6	60	37	29	27	25 -		
APRIL	233	862	503	175	.35	10.2	90	44	34	30	27		
MAY	99	589	306	118	.39	6.2	120	53	41	<b>3</b> 6	33		
JUNE	54	375	170	97	.57	3.4	183	104	78	<b>6</b> 6	57		
JULY	<b>4</b> 6	144	67	24	.36	1.4							
AUGUST	25	100	<b>4</b> 6	21	<b>.4</b> 6	.9							
	24	176	59	39	•66	1.2							
SEPTEMBER													
ANNUAL	183	644			.30 EOUS PEAK	100 FLOW	 MA(				OF ANNUAL		
DISCHARGE,	183 FUDE AND BASE	PROBABIL D ON PER	ITY OF IN	NSTANTANE ECORD 196	EOUS PEAK 64-82	FLOW	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO		964-82 TED RECUR O ANNUAL	RENCE
MAGNIT DISCHARGE, YEARS, #	183  TUDE AND BASE  IN CFS, AND ANNUA	PROBABIL D ON PER FOR IND L EXCEED/	ITY OF IN IOD OF RE ICATED RE	NSTANTANE ECORD 196 ECURRENCE BABILITY,	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 19 R INDICAT	964-82 TED RECUR O ANNUAL	RENCE
MAGNIT	183 FUDE AND BASE	PROBABIL DON PER FOR INDI	ITY OF IN IOD OF RE ICATED RE	NSTANTANE ECORD 196 ECURRENCE BABILITY,	EOUS PEAK 64-82 INTERVAL	FLOW , IN	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 19 PR INDICATE EARS, AND BILITY, I	964-82 FED RECUR O ANNUAL IN PERCEN	RENCE T
MAGNIT DISCHARGE, YEARS, #	183  TUDE AND BASE  IN CFS, AND ANNUA	PROBABIL D ON PER FOR IND L EXCEED/	ITY OF IN IOD OF RE ICATED RE	NSTANTANE ECORD 196 ECURRENCE BABILITY,	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y	ECORD 19 PR INDICATE EARS, AND BILITY, I	FED RECUR ANNUAL	RENCE
MAGNIT DISCHARGE, YEARS, #	183  TUDE AND BASE  IN CFS, AND ANNUA	PROBABIL ED ON PER FOR IND L EXCEED/	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY,	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	RECORD 19 PR INDICATE REARS, AND BILITY, 1 25 4%	964-82 FED RECUR O ANNUAL IN PERCEN	RENCE T
MAGNITON MAG	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY, 25 4%	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 20% 6930	CFS, FO AL, IN Y CE PROBA 10%	RECORD 19 PR INDICATE FARS, AND BILITY, 1 25 4% 9890	964-82 FED RECUR O ANNUAL IN PERCEN	RENCE T
MAGNITO	183 FUDE AND BASE , IN CFS, AND ANNUA	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY, 25 4%	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6930 5010	CFS, FO AL, IN Y CE PROBA 10 10% 8290 6040	RECORD 19 RE INDICAT FEARS, AND BILITY, 1 25 4% 9890 7290	964-82 FED RECUF O ANNUAL IN PERCEN 50 2%	RENCE T
MAGNITON MAG	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY, 25 4%	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6930 5010 3510	CFS, FO AL, IN Y CE PROBA 10 10% 8290 6040 4190	RECORD 19 RE INDICATE ARS, AND BILITY, 1	964-82 FED RECUF D ANNUAL IN PERCEN 50 2%	RENCE T
MAGNITO	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY, 25 4%	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4730 3430 2440 1760	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6930 5010 3510 2440	CFS, FO AL, IN Y CE PROBA 10 10% 8290 6040 4190 2850	RECORD 19 RE INDICAT EARS, AND BILITY, I  25 4%  9890 7290 5030 3350	964-82 FED RECUF O ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNITO	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY, 25 4%	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4730 3430 2440 1760 1350	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6930 5010 3510 2440 1800	CFS, FO AL, IN Y CE PROBA 10 10% 8290 6040 4190 2850 2050	PRECORD 19 PRECORD 19	FED RECUF D ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNITO	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY, 25 4%	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4730 3430 2440 1760 1350 1030	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$  6930 5010 3510 2440 1800 1410	CFS, FO AL, IN Y CE PROBA 10 10%	9890 7290 5030 3350 2340 1930	964-82 FED RECUF D ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNITON MAG	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 196 ECURRENCE BABILITY, 25 4%	EOUS PEAK 64-82 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4730 3430 2440 1760 1350	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6930 5010 3510 2440 1800	CFS, FO AL, IN Y CE PROBA 10 10% 8290 6040 4190 2850 2050	PRECORD 19 PRECORD 19	FED RECUF D ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNITON MAG	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE ICATED REANCE PROE	STANTANE CORD 196 CCURRENCE BABILITY, 25 4%	EOUS PEAK 4-82 INTERVAL IN PERCE	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4730 3430 2440 1760 1350 1030 927	ARGE, IN INTERVEXCEEDAN  6930 5010 3510 32440 1800 1410 1240	CFS, FO AL, IN Y CE PROBA  10 10%  8290 6040 4190 2850 2050 1640 1430	9890 7290 5030 3350 2340 1930	FED RECUF D ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNITON MAG	183  FUDE AND BASE  , IN CFS, ND ANNUA  2  50%	PROBABIL D ON PER FOR IND L EXCEED/ 5 20%	ITY OF IN IOD OF RE CATED RE ANCE PROE 10 10%	STANTANE CORD 196 CCURRENCE BABILITY, 25 4%	EOUS PEAK 4-82 E INTERVAL IN PERCE 50 2% OF DAILY	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4730 3430 1760 1350 1030 927  OF RECO	D ON PER	CFS, FO AL, IN Y CE PROBA  10 10%  8290 6040 4190 2850 2050 1640 1430	9890 7290 5030 3350 2340 1950	FED RECUF D ANNUAL IN PERCEN 50 2%	T 100 1%

#### 14150800 WINBERRY CREEK NEAR LOWELL. OR

LOCATION.--Lat 43°54'50", long 122°41'15", in NEtSEt sec.16, T.19 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.9 mi upstream from Nelson Creek, 4.6 mi east of Lowell, and at mile 4.4.

DRAINAGE AREA .-- 43.9 mi2.

404

282

220

183

153

PERIOD OF RECORD.--August 1963 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 863.70 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years, 118  $ft^3/s$ , 36.50 in/yr, 85,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Msximum discharge, 4,500 ft $^3$ /s Dec. 22, 1964, gage height, 8.07 ft; minimum, 1.5 ft $^3$ /s Sept. 4, 5, 8-10, 1967.

#### STATISTICAL SUMMARIES

.,	ONTHLY AN	ið <b>A</b> nnual	MEAN DIS	SCHARGES	1964-81		MA		AND PROBA O ON PERI		OF ANNUAL ECORD 19	LOW FLO 65-81	WC
	MINIMIN	MAYIMIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	1	INTERVAL,	IN YEAR	R INDICATI RS, AND AI BILITY, II	NNUAL NO	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	7.9	83	27	20	.74	1.9	1	4.3	3.1	2.6	2.2		
NOVEMBER	22	429	146	116	.79	10.2	3	4.4	3.2	2.7	2.3		
DECEMBER	16	668	235	148	.63	16.5	7	4.7	3.4	2.9	2.5		
JANUARY	32	512	277	140	.51	19.4	14	5.1	3.7	3.2	2.7		
FEBRUARY	20	311	162	73	.45	11.4	30	5.8	4.1	3.5	3.1		
MARCH	58	399	182	92	•51	12.8	60	7.7	5.6	4.8	4.3		
APRIL	80	362	166	66	.40	11.7	90	9.4	6.8	5.9	5.3		
MAY	36	258	122	51	.42	8.6	120	12	9.0	7.9	7.3		
JUNE	14	170	63	48	.76	4.4	183	29	20	16	14		
JULY	8.6	47	18	9.3	.52	1.2							
AUGUST	3.8	33	11	8.5	.75	.8							
SEPTEMBER	4.3	73	15	16	1.07	1.1							
ANNUAL	61	182	118	36	.30	100							
DISCHARGE	, IN CFS,	D ON PERI	OD OF RE	CORD 196	4-81			BASE	ON PERI	OD OF R	ECORD 19	64-81	
		AL EXCEEDA	NCE PROE	BABILITY,	IN PERCE	NT 	PERIOD (CON-		INTERVA	L, IN Y	R INDICATI EARS, AND BILITY, II	ANNUAL	
1.25	AND ANNUA 2 50%		NCE PROE		IN PERCE 50	NT  100	(CON- SECU-	E	INTERVA EXCEEDANC	L, IN YE	EARS, AND BILITY, II	ANNUAL N PERCEN	<b>Ι</b> Τ
1.25	2	AL EXCEEDA 5	NCE PROE	BABILITY, 25	IN PERCE	NT 	(CON-		INTERVA	L, IN Y	EARS, AND	ANNUAL	
1.25	2	5 20%	NCE PROE	BABILITY, 25	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS)	2 50%	INTERVA EXCEEDANC 5 20%	L, IN YEE PROBAB	EARS, AND BILITY, II 	ANNUAL N PERCEN  50	IT 100
1.25 80% 1090	2 50% 1800	5 20% 2890	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS)	2 50%	INTERVA EXCEEDANC 5 20%	L, IN YEE PROBAGE 10 10%	25 25 29 2990	ANNUAL N PERCEN 50 2%	IT 100
1.25 80% 1090	2 50%	5 20% 2890	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS)	2 50% 1300 990	1NTERVA EXCEEDANC 5 20% 1980 1490	10 10% 2430 1830	25 4% 2990 2270	ANNUAL N PERCEN 50 2%	100 1%
1.25 80% 1090	2 50% 1800	5 20% 2890	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS) 	2 50% 1300 990 687	INTERVA EXCEEDANC 5 20% 1980 1490 1010	10 10% 2430 1830 1240	25 4% 2990 2270 1550	### ANNUAL  N PERCEN  50  2%	100 1%
1.25 80% 1090	2 50% 1800	5 20% 2890	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS) 	2 50% 1300 990 687 483	1980 1490 1010 669	L, IN YEE PROBABLE 10 10%	25 4% 2990 2270 1550 947	ANNUAL N PERCEN 50 2%	100 1%
1.25 80% 1090	2 50% 1800	5 20% 2890	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS) 	2 50% 1300 990 687 483 373	1980 1490 1010 669 493	10 10% 2430 1830 1240 792 566	2990 2270 1550 947 651	### ANNUAL  N PERCEN  50  2%	100 1%
1.25 80% 1090	2 50% 1800	5 20% 2890	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS) 	1300 990 687 483 373 286	1980 1490 1010 669 493 383	10 10% 2430 1830 1240 792 566 445	2990 2270 1550 947 651 522	### ANNUAL N PERCEN 50 2%	100 1%
1.25 80% 1090	2 50% 1800	5 20% 2890	10 10% 3650	25 48 4650	50 2%	NT	(CON- SECU- TIVE DAYS) 	2 50% 1300 990 687 483 373 286 258	1980 1490 1010 669 493 383 383	L, IN YEE PROBAGE 10 10 10 10 2430 1830 1240 792 566 445 385	2990 2270 1550 947 651	### ANNUAL N PERCEN 50 2%	100 1%
1.25 80% 1090	2 50% 1800	2890 223	10 10 10 3650 DURATIO	25 4% 4650	IN PERCE 50 2%	NT	(CON- SECU- TIVE DAYS) 	2 50% 1300 990 687 483 373 286 258	1980 1980 1010 669 493 383 383 38D 1964-8	L, IN YEE PROBAGE 10 10 10%	25 4% 2990 2270 1550 947 651 522 440	### ANNUAL N PERCEN 50 2%	100 1%

5.3

#### 14151000 FALL CREEK BELOW WINBERRY CREEK. NEAR FALL CREEK. OR

LOCATION.--Lat 43°56'40", long 122°46'25", in NW\SE\ sec.2, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on right bank
10 ft upstream from highway bridge, 1.1 mi downstream from Fall Creek Dam, 2.3 mi southeast of town of Fall Creek, and at mile
6.1. Prior to Aug. 27, 1982 at site on left bank.

DRAINAGE AREA .-- 186 mi2.

PERIOD OF RECORD.--October to December 1911 (published as "Big Fall Creek near Fall Creek"; gage heights and discharge measurements only), September 1935 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 637.81 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Oct. 1 to Dec. 31, 1911, nonrecording gage at site 0.25 mi downstream at different datum. Sept. 9, 1935, to Aug. 3, 1950, nonrecording gage at present site and datum.

REMARKS.--Flow regulated since 1966 by Fall Creek Lake. No diversion above station.

AVERAGE DISCHARGE.--47 years, 582 ft<sup>3</sup>/s, 42.49 in/yr, 421,700 acre-ft/yr, adjusted for storage since January 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 18.80 ft, from rating curve extended above 9,700 ft<sup>3</sup>/s; minimum, 1.5 ft<sup>3</sup>/s Oct. 7, 8, 1965.

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF FALL CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-65

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-65

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
40NTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100
CTOBER	27	1001	207	228	1.10	2.9	1	32	25	23	20	. 18	
OVEMBER	26	1588	751	487	.65	10.6	3	32	26	23	21	19	
ECEMBER	139	3180	1125	811	•72	15.9	7	33	27	24	22	19	
ANUARY	169	2265	1041	630	.61	14.7	14	35	28	25	22	20	
EBRUARY	254	2330	1158	432	.37	16.3	30	39	31	27	25	22	
ARCH	149	1806	1020	432	.42	14.4	60	46	36	31	28	25	
PRIL	214	1729	765	350	.46	10.8	90	53	41	36	32	28	
AY	151	1149	520	266	.51	7.3	120	71	51	42	36	30	
UNE	68	667	294	160	.54	4 - 1	183	158	110	89	74	59	
ULY	38	169	100	38	.38	1.4							
UGUST	23	79	52	14	.27	• 7							
	71	121	65	27									
EPTEMBER		121	55	23	•42	.8							
EPTEMBER	306	924	588	136	.23	100	 MA(	SNITUDE	AND PROF		OF ANNUA	AL HIGH F	
MAGNI ISCHARGE YEARS,	JOE AND BASE	924 PROBABILI D ON PERI FOR INDI	588 TY OF IN OD OF RE	136 ISTANTANE CORD 193 CURRENCE IABILITY,	.23 COUS PEAK I 66-65 INTERVAL IN PERCEI	100 FLOW , IN	PERIOD (CON-	BAS	HARGE, II	N CFS, F	RECORD OR INDICATE	AL HIGH FI 1936-65 ATED RECU ND ANNUAL IN PERCE	RRENCE
EPTEMBER NNUAL MAGNI ISCHARGE	306 TUDE AND BASE	924 PROBABILI D ON PERI	588 TY OF IN	136 ISTANTANE CORD 193 CURRENCE	.23 COUS PEAK I 66-65 INTERVAL IN PERCEI	100  FLOW , IN	PERIOD (CON- SECU- TIVE	DISCI	HARGE, II INTERI EXCEEDAN	N CFS, FOUNT OF THE PROBLEM TO	OR INDICATE ARILITY,	1936-65 ATED RECUIND ANNUAL IN PERCE	RRENCE
MAGNI  SCHARGE YEARS,  1.25 80\$	306 TUDE AND BASE , IN CFS, AND ANNUA	924 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	588 TY OF IN OD OF RE CATED RE NCE PROB	136 ISTANTANE CORD 193 CURRENCE ABILITY, 25 4%	.23 OUS PEAK I 6-65 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU-	BASI DISCI	HARGE, II	N CFS, FO	RECORD OR INDICATE YEARS, AN	1936-65 ATED RECU ND ANNUAL IN PERCE	RRENCE
MAGNI SCHARGE YEARS,	306  TUDE AND BASE  , IN CFS, AND ANNUA	924 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	588 TY OF IN OD OF RE CATED RE NCE PROB	136 ISTANTANE CORD 193 CURRENCE ABILITY, 25 4%	.23 OUS PEAK I 66-65 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAN	N CFS, FE VAL, IN NCE PROB.	DR INDICA YEARS, AN ABILITY, 25 4%	1936-65 ATED RECU ND ANNUAL IN PERCE 50 2%	RRENCE NT
MAGNI SCHARGE YEARS, 1.25 80\$	306 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	924 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	588 TY OF IN OD OF RE CATED RE NCE PROB	136 ISTANTANE CORD 193 CURRENCE ABILITY, 25 4%	.23 OUS PEAK I 6-65 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50%	HARGE, II INTER EXCEEDAN 5 20%	N CFS, FOUNT OF THE PROBLEM TO THE P	DR INDICA YEARS, AN ABILITY, 25 4%	1936-65  ATED RECUIND ANNUAL IN PERCE  50 2%	RRENCE NT
MAGNI SCHARGE YEARS, 1, 25, 80\$	306 TUDE AND BASE , IN CFS, AND ANNUA	924 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	588 TY OF IN OD OF RE CATED RE NCE PROB	136 ISTANTANE CORD 193 CURRENCE ABILITY, 25 4%	.23 OUS PEAK I 6-65 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, INTERNEXCEEDAN  5 20%  10700 7550	N CFS, F VAL, IN NCE PROB. 10 10%	OR INDIC/ YEARS, AN ABILITY, 25 4%	1936-65 ATED RECUIND ANNUAL IN PERCE 50 2% 16400 11500	RRENCE NT
MAGNI SCHARGE YEARS, 1, 25, 80\$	306 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	924 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	588 TY OF IN OD OF RE CATED RE NCE PROB	136 ISTANTANE CORD 193 CURRENCE ABILITY, 25 4%	.23 OUS PEAK I 6-65 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 7510 5410 3530	HARGE, II INTERN EXCEEDAN 5 20% 10700 7550 4860	N CFS, FI VAL, IN NCE PROB. 10 10%	OR INDIC/ YEARS, AN ABILITY, 25 4% 14900 10400 6700	1936-65  ATED RECUND ANNUAL IN PERCE  50 2%  16400 11500 7420	RRENCE NT
MAGNI SCHARGE YEARS, 1.25 80\$	306 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	924 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	588 TY OF IN OD OF RE CATED RE NCE PROB	136 ISTANTANE CORD 193 CURRENCE ABILITY, 25 4%	.23 OUS PEAK I 6-65 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 7510 5410 3530 2490	HARGE, II INTERN EXCEEDAN 5 20% 10700 7550 4860 3240	N CFS, F VAL, IN NCE PROB. 10 10% 12700 8870 5700 3670	DR INDIC/ YEARS, AM ABILITY, 25 4% 14900 10400 6700 4160	1936-65  ATED RECUIND ANNUAL IN PERCE  50 2\$  16400 11500 7420 4480	RRENCE NT
MAGNI  ISCHARGE YEARS,  1.25 80\$	306 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	924 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	588 TY OF IN OD OF RE CATED RE NCE PROB	136 ISTANTANE CORD 193 CURRENCE ABILITY, 25 4%	.23 OUS PEAK I 6-65 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 7510 5410 3530	HARGE, II INTERN EXCEEDAN 5 20% 10700 7550 4860	N CFS, FI VAL, IN NCE PROB. 10 10%	OR INDIC/ YEARS, AN ABILITY, 25 4% 14900 10400 6700	1936-65  ATED RECUND ANNUAL IN PERCE  50 2%  16400 11500 7420	RRENCE NT

		DISCH	ARGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85%	90%	95%
2120	1440	1110	894	731	605	426	291	183	104	78	60	49	41	33

## 14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF FALL CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	127	1396	649	340	.52	9.4	1	35	22	15	11		
NOVEMBER	312	1838	861	442	.51	12.4	3	36	22	15	11		
DECEMBER	183	2312	1272	672	.53	18.4	7	40	26	19	14		
JANUARY	153	2093	1123	604	. 54	16.2	14	46	29	21	15		
EBRUARY	24	1391	470	409	.87	6.8	30	61	33	23	17		
MARCH	11	1618	424	487	1.15	6.1	60	95	49	34	24		
\PR!L	43	1010	363	288	.79	5.2	90	155	96	74	60		
MAY	50	557	267	148	.55	3.9	120	220	129	94	71		
JUNE	92	512	240	138	.58	3.5	183	351	257	208	170		
JULY	47	970	300	292	.97	4.3							
AUGUST	78	934	387	29 1	.75	5.6							
SEPTEMBER	115	913	565	243	.43	8.2							
ANNUAL	236	936	578	198	.34	100							
DI SCH <b>A</b> RGE	BASE , IN CFS,	D ON PERIO	OD OF RE	ECORD ECURRENCE	OUS PEAK, I	. IN		BASE	D ON PER	OD OF R	OF ANNUAL ECORD 19 R INDICAT	67-82 ED RECUR	
) I SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	ECORD ECURRENCE	INTERVAL,	. IN	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R  CFS, FO AL, IN Y	ECORD 19	67-82 ED RECUR	RRENCE
) I SCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	ECORD ECURRENCE BABILITY,	INTERVAL,	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R  CFS, FO AL, IN Y	ECORD 19R INDICAT EARS, AND	67-82 ED RECUR	RRENCE
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECEIVED REPORTED REPORTED RECEIVED ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, !	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100	
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RECEIVED REPORTED REPORTED RECEIVED ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDANG  20%  4310	CFS, FO AL, IN Y CE PROBA 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100	
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECEIVED REPORTED REPORTED RECEIVED ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4310 4130	CFS, FO AL, IN Y CE PROBA 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 4870 4690	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT	
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RECEIVED REPORTED REPORTED RECEIVED ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 3500 3350 2920	D ON PER ARGE, IN INTERV EXCEEDAN  5 20%  4310 4130 3800	CFS, FO AL, IN Y CE PROBA 10 10% 4620 4440 4200	ECORD 19  R INDICAT EARS, AND BILITY, !  25 4%  4870 4690 4570	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT	
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RECEIVED REPORTED REPORTED RECEIVED ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  3500 3350 2920 2250	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  4310 4130 3800 2970	CFS, FO AL, IN Y CE PROBA 10 10% 4620 4440 4200 3340	ECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4870 4690 4570 3710	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100	
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RECEIVED REPORTED REPORTED RECEIVED ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH  2 50% 3500 32920 2250 1670	D ON PER ARGE, IN INTERV. EXCEEDANG 5 20% 4310 4130 3800 2970 2210	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10%  4620 4440 4200 3340 2510	ECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4870 4690 4570 3710 2830	ED RECUF ANNUAL N PERCEN	RRENCE NT 100	
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RECEIVED REPORTED REPORTED RECEIVED ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 3500 3350 2920 2250 1670 1340	D ON PER	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 4620 4440 4200 3340 2510 2100	ECORD 19  R INDICAT EARS, AND BILITY, !  25 4%  4870 4690 4570 3710 2830 2370	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100	
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMM	ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCEN 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH  2 50%  3500 3350 2920 2250 1670 1340 1180	ARGE, IN INTERV. EXCEEDAN 4310 4130 3800 2970 2210 1840 1590	CFS, FO AL, IN Y CE PROBA  10 10%  4620 4440 4200 3340 2510 2100 1800	ECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4870 4690 4570 3710 2830	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROE	ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN 50 2%	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	BASE  DISCH  2 50%  3500 2920 2250 1670 1340 0F RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  4310 43800 2970 2210 1840 1590  RD 1967-1	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10%  4620 4440 4200 3340 2510 2100 1800	### RECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4870 4570 3710 2830 2370 2000	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%  D SKEW =	FOR INDICATE TO THE PROPERTY OF THE PROPERTY O	CATED RENCE PROE	ECURRENCE BABILITY, 25 4% ON TABLE CFS, WHI	INTERVAL IN PERCEN 50 2% OF DAILY N	AEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  EXCEEDED FOR	3500 3350 2920 2250 1670 1340 1180 OF RECO	D ON PER	CFS, FO AL, IN Y CE PROBA 10 10% 4620 4440 4200 3340 2510 2100 1800 82	### CORD 19  R INDICAT EARS, AND BILITY, 1  25  4%  4870 4690 4570 3710 2830 2370 2000  IME	ED RECUF ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROE	ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCEN 50 2% OF DAILY N	AEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	BASE  DISCH  2 50%  3500 2920 2250 1670 1340 0F RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  4310 43800 2970 2210 1840 1590  RD 1967-1	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10%  4620 4440 4200 3340 2510 2100 1800	### RECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4870 4570 3710 2830 2370 2000	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT

## 14151500 LITTLE FALL CREEK NEAR FALL CREEK, OR

LOCATION.--Lat 43°58'10", long 122°45'20", in S-1/2 sec.25, T.18 S., R.1 W., Lane County, Hydrologic Unit 17090001, 4 mi east of Fall Creek Post Office and 4.5 mi upstream from mouth.

DRAINAGE AREA .-- 52.5 mi2.

PERIOD OF RECORD. -- October 1935 to September 1948.

GAGE. -- Staff gage. Altitude of gage is 715 ft, by barometer.

REMARKS.--No diversion or regulation above station.

445

614

342 278

230

189

134

94 65 42 34

28 23 19 16

AVERAGE DISCHARGE.--13 years (water years 1936-48), 179 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,110 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 8.20 ft, from rating curve extended above 2,400 ft<sup>3</sup>/s on basis of velocity-area study; minimum observed, 10 ft<sup>3</sup>/s Dec. 1, 1936, Aug. 26, 27, 30, 31, Sept. 1, 1940.

## STATISTICAL SUMMARIES

М	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1936-48		MA				OF ANNUAL RECORD 19		/II
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	OR INDICAT ARS, AND A ABILITY, I	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER	16 13	223 477	56 231	57 166	1.03	2.6	1 3	15 15	12 12	10 11	9.4 9.7		
DECEMBER JANUARY FEBRUARY	52 68 110	865 680 490	304 329 358	241 194 118	.79 .59 .33	14.0 15.2 16.5	7 14 30	15 16 18	12 13 14	11 11 13	9.7 11 12	 	
MARCH APRIL MAY	77 76 49	627 611 226	319 249 130	163 147 58	.51 .59 .44	14.7 11.5	60 90	21 23 28	16 18 21	14 16 18	13 - 15 16	 	
JUNE JULY	37 21	195 68	94 44	48 16	.51 .36	6.0 4.3 2.0	120 183 	49 	35 	29 	25		
AUGUST SEPTEMBER	13 15	36 44	26 25	7.8 9.3	.31 .37	1.2 1.2							
ANNUAL	109	270	179	52	.29	100							
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANEC CORD 1936 CURRENCE	DUS PEAK F 5-48 INTERVAL, IN PERCEN	FLOW	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	OF ANNUAL ECORD 19 R INDICATI EARS, AND BILITY, I	36-48 ED RECUR ANNUAL	RENCE
MAGNI	TUDE AND BASE	PROBABILI D ON PERIO	TY OF INOD OF RE	ISTANTANE (CORD 1936	DUS PEAK F 5-48 INTERVAL, IN PERCEN	FLOW	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 19 R INDICATI EARS, AND	36-48 ED RECUR ANNUAL	RENCE
MAGNITUSCHARGE,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDAL 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1936 CURRENCE BABILITY,	DUS PEAK F 5-48 INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	RECORD 19 RECORD 19 REARS, AND BILITY, 11 25 4%	36-48 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNITOLISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE BABILITY,	DUS PEAK F 5-48 INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	RECORD 19 REINDICATI EARS, AND BILITY, II	36-48 ED RECUF ANNUAL N PERCEN	RRENCE IT
MAGNITOLISCHARGE, YEARS, /	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INDOD OF RE	ISTANTANEC CORD 1936 CURRENCE IABILITY, 25 4%	DUS PEAK F 5-48 INTERVAL IN PERCEN	FLOW  . IN NT 100 18	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1980 1460 1030 766 571 459 408	D ON PER ARGE, IN INTERV EXCEEDAN  2980 2240 1510 1060 770 602 534	CFS, FO AL, IN Y CE PROBA-10 10 10 10 10 10 10 10 10 10 10 10 10 1	RECORD 19 R INDICATI EARS, AND BILITY, II  25 4%  4330 3390 2140 1400 1010 770	36-48 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNITOLISCHARGE, YEARS, /	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INDO OF RECATED RENCE PROB	ISTANTANEC CORD 1936 CURRENCE SABILITY, 25 4% 7210	DUS PEAK F 5-48 INTERVAL, IN PERCEN 50 1 2%	FLOW  IN  IN  IOO  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1980 1460 1030 766 571 459 408  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$ 2980 1510 1060 770 602 534  RD 1936-	CFS, FO AL, IN Y CE PROBA 10 103	RECORD 19 RECORD	36-48 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT

#### 14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'55", long 122°54'20", in SW\u00e4SW\u00e4 sec.14, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090001, on right bank 25 ft downstream from highway bridge at Jasper, 0.1 mi downstream from Hills Creek, and at mile 195.0.

DRAINAGE AREA .-- 1,340 mi2.

PERIOD OF RECORD.--September 1905 to February 1912, July 1913 to March 1917, October 1952 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 513.45 ft National Geodetic Vertical Datum of 1929. September 1905 to February 1912 and July 1913 to March 1917, nonrecording gage at approximately same site at datum about 1.5 ft higher. Oct. 22, 1952, to Sept. 30, 1953, nonrecording gage at site 25 ft upstream at same datum.

REMARKS.--Flow regulated since 1953 by Lookout Point Lake, since 1961 by Hills Creek Lake, and since 1966 by Fall Creek Lake.

AVERAGE DISCHARGE.--39 years (water years 1906-11, 1914-16, 1953-82), 4,089 ft<sup>3</sup>/s, 2,962,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/s Nov. 23, 1909, gage height, 17.4 ft, datum then in use, from graph based on gage readings, from rating curve extended above 42,000 ft³/s; minimum, 366 ft³/s Dec. 5, 1954.

#### STATISTICAL SUMMARIES (AFTER COMPLETION OF THREE UPSTREAM DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	⊃ <b>N</b>
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	2946	4685	4052	481	.12	8.2	1	1310	946	753	605		
NOVEMBER	2937	10510	5969	2219	.37	12.1	3	1330	957	762	612		
DECEMBER	1517	14630	8272	3817	.46	16.7	7	1370	969	770	619		
JANUARY	1327	11480	7223	3086	.43	14.6	14	1420	1000	805	654		
FEBRUARY	787	9460	4114	2757	.67	8.3	30	1520	1090	889	735		
MARCH	1111	10550	3481	2505	.72	7.0	60	1760	1290	1080	921		
APRIL	729	5603	2902	1549	.53	5.9	90	1940	1410	1170	1000		
<b>YAY</b>	844	4875	2774	1235	.45	5.6	120	2100	1520	1270	1100		
JUNE	1187	5016	2669	1194	.45	5.4	183	2490	1950	1710	1530		
JULY	1248	2562	2005	355	.18	4.1							
AUGUST	1818	3340	2427	371	.15	4.9							
SEPTEMBER	1830	4703	3521	868	.25	7.1							
ANNUAL	1877	6215	4121	1266	.31	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1967-82

DISCHARGE, YEARS,	, IN CFS,						PERIOD (CON-	DISC	INTER	VAL, ÍN '	OR INDICAT YEARS, AND ABILITY. I	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1 <b>5</b>
							1	16200	19000	19800	20200		
WEIGHTED	SKEW =						3	15500	18600	19500	20100		
							7	14400	17900	19200	20200		
							15	12300	15900	17600	19100		
							30	10100	13400	15100	16900		
							60	8320	11100	12800	14500		
							90	7530	10000	11400	12800		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-82

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATE	D PERCENT	OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
11900	8460	6360	5420	4880	4490	3790	3070	2490	2110	1960 1	1810	1670	1530	1350

## WILLAMETTE RIVER BASIN 14152500 COAST FORK WILLAMETTE RIVER AT LONDON. OR

WILLAMETTE RIVER BASIN 41

LOCATION.--Lat 43°38'30", long 123°05'05", in SW\ sec.20, T.22 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 0.6 mi north of London, 11.0 mi south of Cottage Grove, and at mile 35.9.

DRAINAGE AREA. -- 72.1 mi2.

PERIOD OF RECORD.--September 1935 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 852.58 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 18 to Oct. 17, 1935, nonrecording gage at same site and datum.

REMARKS. -- No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--47 years, 201 ft<sup>3</sup>/s, 37.86 in/yr, 145,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.37 ft, from rating curve extended above 3,200 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 6.8 ft<sup>3</sup>/s Aug. 18, 1977.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEARS CE PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	12	472	62	76	1.23	2.6	1	13	10	9.2	8.3	7.4	6.9
NOVEMBER	12	847	235	174	.74	9.7	3	13	11	9.4	8.5	7.7	7.1
DECEMBER	26	1333	408	293	.72	16.8	7	13	11	9.7	8.8	7.9	7.4
JANUARY	34	852	432	255	.59	17.8	14	14	12	10	9.3	8.3	7.7
FEBRUARY	46	827	391	163	.42	16.1	30	15	13	11	10	9.4	8.8
MARCH	84	700	3 <b>5</b> 3	160	. 45	14.6	60	18	15	13	12	11	11
APRIL	86	611	246	115	.47	10.1	90	20	16	15	14	12	12
MAY	44	416	146	77	.53	6.0	120	25	20	18	16	14	13
JUNE	26	240	77	42	.55	3.2	183	46	34	29	25	22	19
JULY	17	65	32	11	.34	1.3							
AUGUST	12	39	20	6.3	.31	.8							
SEPTEMBER	9.2	58	22	8.9	.40	.9							
ANNUAL	65	344	201	57	.29	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82

DISCHARGE, YEARS, A					NCE INTER		PERIOD (CON-		INTERV	/AL, ÍN Y	R INDICA EARS, AN	ID ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
2270	36 <b>3</b> 0	5840	7480	9760	11600	13500				4040			7000
WEIGHTED	SKEW =	.017					1 3	2580 1950	4000 2860	4960 3420	6160 4050	7040 4480	7900 4880
HE FORTIEL	JICEN -	•017					7	1310	1890	2230	2640	2920	3180
							15	911	1260	1470	1710	1880	2030
							30	697	926	1050	1190	1280	1360
							60	550	725	820	921	984	1040
							90	479	625	705	793	850	900

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

 		DISCH	ARGE, IN	CFS, WH	HICH WAS	EQUALED	OR EXCEED	ED FOR	INDICATED	PERCENT	OF TIME			
 5 <b>%</b>	10%	15%	20%	25%	30 <b>%</b>	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
 742	497	373	294	240	200	139	93	59	<b>3</b> 6	29	24	20	17	15

MONTHLY AND ANNUAL MEAN DISCHARGES 1943-82

#### 42

#### 14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM. OR

LOCATION.--Lat 43°43'15", long 123°02'55", in NEt sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at bridge 0.3 mi downstream from Cottage Grove Dam, 5.5 mi south of Cottage Grove, and at mile 29.4.

DRAINAGE AREA .-- 104 mi2.

PERIOD OF RECORD.--January 1939 to September 1982. Prior to October 1944, published as "near Cottage Grove."

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Jan. 1 to Oct. 12, 1939, nonrecording gage and Oct. 13, 1939, to Sept. 30, 1944, water-stage recorder at several sites and datums 0.8 mi downstream.

REMARKS.--Flow regulated since 1942 by Cottage Grove Lake. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 275 ft3/s, 35.91 in/yr, 199,200 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft3/s Dec. 24, 1964, gage height, 11.83 ft; no flow July 5-7, 1945, and for part of Aug. 24, 1947.

#### STATISTICAL SUMMARIES

BASED ON PERIOD OF RECORD 1944-82 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-DARD COEFF1-PERCENT PERIOD EXCEEDANCE PROBABILITY, IN PERCENT DEVIA-CIENT OF OF (CON-MINIMUM MAXIMUM MEAN TION VARI-ANNUAL SECU-MONTH (CFS) ATION RUNOFF 20 50 100 (CFS) (CFS) (CFS) TIVE 10 50% 20% 10% 5% 2% 1% DAYS) OCTOBER 141 207 .68 NOVEMBER 31 1000 341 241 .71 10.1 41 25 17 12 7.6 5.3 DECEMBER 34 1627 590 375 .64 17.5 7 43 28 21 15 9.9 7.2 JANHARY 48 1372 634 385 .61 18.8 14 45 31 24 19 14 11 **FEBRUARY** 30 1140 421 238 .57 12.5 30 48 36 30 25 20 17 23 30 37 32 27 MARCH 1060 347 246 .71 10.3 60 56 43 24 APRIL 67 38 684 208 145 .70 90 51 44 32 29 6.2 MAY 48 503 136 105 .77 4.0 120 78 59 51 38 35 JUNE 49 93 283 46 .50 2.8 183 117 80 73 68 JULY 24 89 56 13 .24 1.7 AUGUST 26 399 117 95 .81 3.5 SEPTEMBER 46 465 215 96 . 45 6.4 ANNUAL 77 468 280 82 . 29 100 MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1943-82

BASED (	ON PERIOD	OF	RECORD	

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

DISCHARGE, YEARS, A			DICATED F				PERIOD (CON-		INTERV	CFS, FO	EARS, AN	D ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
								0					
WEIGHTED	SKEW =						3	2690 2470	3120 2930	3200 3030	3240 3080	3250 3090	3250 3090
							/ 15	1950 1320	2560 1820	2810 2080	2990 2350	3080 2520	3130 2650
							30 60	987 754	1320 1010	1490 1120	1670 1230	1770 1280	1850 1330
							90	650	860	950	1020	1060	1090

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1943-82

			DISCH	ARGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	1140	679	486	385	307	256	174	109	84	70	63	57	53	49	40

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

## 14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR

LOCATION.--Lat 43°44'10", long 122°52'20", in NEt sec.24, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.5 mi upstream from Pitcher Creek, 1.2 mi northwest of Dorena, and at mile 13.2.

DRAINAGE AREA .-- 211 mi2.

PERIOD OF RECORD.--September 1935 to September 1982. Prior to Dotober 1949, published as "at Star."

GAGE.--Water-stage recorder. Datum of gage is 856.16 ft National Geodetic Vertical Datum of 1929. Sept. 16, 1935, to Oct. 17, 1938, nonrecording gage at site 450 ft upstream at datum 1.00 ft higher.

REMARKS.--Slight regulation caused by upsteam logponds. No diversion above station.

AVERAGE DISCHARGE.--47 years, 599 ft<sup>3</sup>/s, 38.55 in/yr, 434.000 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.19 ft, from rating curve extended above 12,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 10 ft<sup>3</sup>/s Sept. 24, 25, 1951, Oct. 7, 8, 1958.

#### STATISTICAL SUMMARIES

MONTH	MINIMUM			DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-		INTERVA	L, IN YE		ANNUAL IN PERC	
	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU <del>-</del> TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	20	1152	164	198	1.21	2.3	1	18	14	13	12	10	9.
NOVEMBER	19	2569	733	543	.74	10.2	3	19	15	13	12	11	10
DECEMBER	58	4114	1187	868	.73	16.4	7	20	16	14	13	12	11
JANUARY	86	2606	1207	735	.61	16.7	14	21	17	15	14	12	12
FEBRUARY	81	2159	1100	469	.43	15.2	30	24	19	17	15	14	13
MARCH	189	2168	1025	478	. 47	14.2	60	29	22	20	18	16	15
APRIL	290	2161	829	359	.43	11.5	90	36	27	24	21	19	18
MAY	133	1333	555	281	-51	7.7	120	51	36	31	27	23	21
JUNE	64	692	261	159	.61	3.6	183	134	90	72	59	47	40
JULY	26	157	74	33	. 45	1.0							
AUGUST	15	106	38	20	.51	•5							
SEPTEMBER	16	259	47	40	.85	.7							
ANNUAL	233	1008	599	168	.28	100							
DISCHARGE,	BASE IN CFS,	PROBABILIT D ON PERIO FOR INDIO L EXCEEDAN	OD OF RE	CORD 193 CURRENCE	6-82  INTERVAL,	. IN	PERIOD (CON-	BASE DISCH	HARGE, II	RIOD OF F	RECORD  OR INDICA YEARS, AN	AL HIGH I 1936-82 ATED RECI ND ANNUAL IN PERCI	JRRENCE
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%		100 1%	SECU- TIVE	2	 5	10	 25	 50	100
							DAYS)	50%	20%	10%	4%	2%	1%
7590	11500	17000 20	0600 2	5200 2	8600 319	000		0440	40000	4.4000	10000	00700	22500
WEIGHTED	CKEM -	- 207					1 3	8140 5840	12200 8520	14800 10200	18000 12300	20300 13700	22500 15200
HE LONIED	JKLW -	207					כ 7	3870	5500	6530	7760	8630	9470
							,	2010	2200	0550	7/00	ດຕານ	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

		DISCH	ARGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2200	1470	1120	901	749	625	426	275	156	78	58	44	35	28	22

#### 14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", ln NE± sec.36, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank 1.7 mi upstream from Mosby Creek, 2.1 mi downstream from Dorena Dam, 3.5 mi east of Cottage Grove, and at mile 5.5.

DRAINAGE AREA. -- 270 mi2.

PERIOD OF RECORD. -- January 1939 to September 1982. Prior to October 1947, published as "near Dorena."

GAGE.--Water-stage recorder. Datum of gage is 685.24 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Jan. 5 to Oct. 12, 1939, nonrecording gage at site 180 ft upstream at datum 1.00 ft higher.

REMARKS.--Flow regulated since October 1949 by Dorena Lake. No diversion above station.

AVERAGE DISCHARGE.--43 years, 753 ft<sup>3</sup>/s, 37.87 in/yr, 545,500 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft $^3$ /s Dec. 28, 1945, gage height, 18.20 ft; minimum, 0.20 ft $^3$ /s Sept. 25 to Oct. 7, 1958.

STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF DORENA DAM)

M	ONTHLY AN	ID ANNUAL I	MEAN DIS	CHARGES	1940-49		MA			BABILITY OR RE			OW
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI~ CIENT OF VARI~	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	I CFS, FOR ., IN YEAR	RS, AND A	NNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	36	842	185	240	1.30	2.2	1						
OVEMBER	40	1953	1053	687	.65	12.7	3						
ECEMBER	171	3481	1383	1034	•75	16.7	7						
ANUARY	438	2261	1128	696	.62	13.6	14						
EBRUARY	370	1942	1372	509	• 37	16.5	30						
MARCH	222	1621	1050	431	•41	12.7	60						
APRIL	353	1717	925	456	.49	11.1	90						
YAY	169	1101	632	354	• 56	7.6	120						
JUNE	80	833	364	236	-65	4.4	183						
JULY	37	174	99	48	-48	1.2							
AUGUST	20	85	48	20	.42	.6	NOTE:	LESS THA	N 10 YEA	RS OF DAT	A AVAILA	BLE.	
SEPTEMBER	34	148	61	35	.57	•7							
ANNUAL	424	1073	688	224	•33	100							
MAGNI		PROBABILI D ON PERIO			OUS PEAK 1	FLOW	MA			BABILITY C			_OW
OISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 194		 , IN	PERIOD	BASE DISCH	IARGE, IN	RIOD OF RE	CORD 19 INDICAT	40-49 ED RECUF	RRENCE
OISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 194	0-49 INTERVAL IN PERCE	 , IN		BASE DISCH	IARGE, IN	RIOD OF RE	CORD 19 INDICAT	40-49 ED RECUF	RRENCE
YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD 194 CURRENCE	0-49 INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASE DISCH	IARGE, IN	RIOD OF RE	CORD 19 INDICAT	40-49 ED RECUF	RRENCE
YEARS, A	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE	BASE DISCH	IARGE, IN INTERV EXCEEDAN	I CFS, FOR AL, IN YE ICE PROBAB	CORD 19 R INDICATE ARS, AND ILLITY, 1	ED RECUF ANNUAL N PERCEN	RRENCE
YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE	BASE DISCH	IARGE, IN INTERV EXCEEDAN	I CFS, FOR AL, IN YE ICE PROBAB	CORD 19 R INDICATE ARS, AND ILLITY, 1	ED RECUF ANNUAL N PERCEN	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN	I CFS, FOR VAL, IN YE ICE PROBAB	CORD 19 R INDICAT RARS, AND RILITY, I	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 8580 6150 4040	IARGE, IN INTERV EXCEEDAN 5 20% 13300 9440 6140	1 CFS, FOR AL, IN YE CE PROBAB	CORD 19 R INDICAT FARS, AND HILITY, I 25 4%	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH 2 50% 8580 6150 4040 2810	13300 9440 6140 4070	I CFS, FOR AL, IN YE CE PROBAB.  10 10 10 10 1700 7580 4930	RINDICAT RINDICAT RARS, AND ILLITY, I 25 4%	ED RECUP ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	BASE DISCH 2 50% 8580 6150 4040 2810 2150	HARGE, IN INTERVEXCEEDAN 5 20% 13300 9440 6140 4070 2940	10 CFS, FOR YAL, IN YE ICE PROBAB 10 10% 16500 11700 7580 4930 3420	CORD 19 R INDICAT RARS, AND RILLITY, I 25 4%	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH 2 50% 8580 6150 4040 2810	13300 9440 6140 4070	I CFS, FOR AL, IN YE CE PROBAB.  10 10 10 10 1700 7580 4930	CORD 19 R INDICAT CARS, AND RILITY, I 25 4%	40-49 ED RECUF ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE ABILITY,	0-49 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	BASE DISCH 2 50% 8580 6150 4040 2810 2150	HARGE, IN INTERVEXCEEDAN 5 20% 13300 9440 6140 4070 2940	10 CFS, FOR YAL, IN YE ICE PROBAB 10 10% 16500 11700 7580 4930 3420	CORD 19 CORD 1	50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROE	CURRENCE ABILITY,	0-49 INTERVAL IN PERCE 50 2%	, IN NT  1% 	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH 2 50% 8580 6150 4040 2810 2150 1670 1500	ARGE, IN INTERVEXCEEDAN  13300 9440 4070 2940 2280 2020	10 CFS, FOR AL, IN YE CE PROBAB 10 10% 16500 11700 7580 4930 3420 2680 2360	CORD 19 CORD 1	50 2%	100 17
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROE	CORD 194  CURRENCE ABILITY,  25 4%   N TABLE	0-49 INTERVAL IN PERCE 50 2%	, IN NT  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	BASE  DISCH  2 50%  8580 6150 4040 2810 2150 1670 0F RECC	13300 6140 4070 2280 2080 13300 6140 4070 2280 2020	10 CFS, FOR AL, IN YE CE PROBAB 10 10% 16500 11700 7580 4930 3420 2680 2360	R INDICAT	50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROE	CORD 194  CURRENCE ABILITY,  25 4%   N TABLE	0-49  INTERVAL IN PERCE 50 2%  OF DAILY  CH WAS EQ	MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	BASE  DISCH  2 50%  8580 6150 4040 2810 2150 1670 0F RECC	13300 6140 4070 2280 2080 13300 6140 4070 2280 2020	10 CFS, FOR AL, IN YE CE PROBAB 10 10% 16500 11700 7580 4930 3420 2680 2360	R INDICAT	50 2%	100 1%

## 14155500 ROW RIVER NEAR COTTAGE GROVE, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF DORENA DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1950-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1951-82

		MANIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT	PERIOD (CON-		INTERVAL	, IN YEA	RS, AND	ATED RECU ANNUAL N IN PERCE	ON-
НТИОМ	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE Days)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	29	1287	443	289	.65	4.8	1						
NOVEMBER	58	2957	907	714	.79	9.8	3						
DECEMBER	108	4277	1624	1029	.63	17.5	7						
JANUARY	100	3336	1631	919	.56	17.6	14						
EBRUARY	69	2568	1186	644	.54	12.8	30	131	84	57	37	21	
4ARCH	55	2739	992	667	.67	10.7	60	162	111	88	71	54	
\PRIL	200	1588	740	397	.54	8.0	90	217	151	121	99	78	
MAY	186	1515	521	340	.65	5.6	120	266	190	150	120	90	
JUNE	120	777	309	160	.52	3.3	183	326	256	220	192	162	
JULY	96	569	205	111	.54	2.2							
AUGUST	50	899	382	235	.62	4.1							
SEPTEMBER	90	705	322	152	• 47	3.5							
ANNUAL	288	1229	771	212	• 27	100							
OISCHARGE,	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD	OUS PEAK F	, IN		BASE	D ON PER	OD OF R	RECORD 1	TED RECU	
OISCHARGE,	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL,	, IN	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 1	1950-82	RRENCE
)ISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD CURRENCE	INTERVAL,	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 1	1950-82 TED RECUI	RRENCE
OISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDA	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	RECORD 1 R INDICA EARS, AN BILITY,	TED RECUI TED RECUI TO ANNUAL IN PERCEI 50 2%	RRENCE
OISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 20% 6280	CFS, FO AL, IN Y CE PROBA	RECORD 1 R INDICA EARS, AN BILITY, 25 4%	1950-82 ATED RECUI ID ANNUAL IN PERCEI	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4780 4560	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6280 5980	CFS, FO CFS, FO AL, IN Y CE PROBA 10 10%	RECORD 1 REINDICA EARS, AN BILITY, 25 4% 9690 8600	1950-82 ITED RECUI ID ANNUAL IN PERCEI 50 2% 11600 9880	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 20% 6280	CFS, FO AL, IN Y CE PROBA	RECORD 1  OR INDICA EARS, AN BILITY,  25 4%  9690	MPSO-82  INTED RECUI ID ANNUAL IN PERCEI  50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4780 4560 4360	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6280 5980 5590	CFS, FO AL, IN Y CE PROBA 10 10% 7600 7060 6210	RECORD 1 PR INDICATEARS, AN BILITY, 25 4% 9690 8600 6830	1950-82 ITED RECUI ID ANNUAL IN PERCEI 50 2% 11600 9880 7200	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASE DISCH 2 50\$ 4780 4560 4360 3310 2570	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6280 5980 5980 5990 4410 3360	CFS, FO AL, IN Y CE PROBA 10 10% 7660 7060 6210 5050 3810	RECORD 1	1950-82 ITED RECUI ID ANNUAL IN PERCEI 50 2\$ 11600 9880 7200 6260	100 13
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4780 4560 4360 3310	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6280 5980 5980 4410	CFS, FO AL, IN Y CE PROBA 10 10% 7600 7060 6210 5050	RECORD 1	1950-82  ITED RECUI ID ANNUAL IN PERCEI  50 2%  11600 9880 7200 6260 4640	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	CATED RE	CORD CURRENCE IABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  4780 4560 4360 4361 2570 1950 1690	ARGE, IN INTERV EXCEEDAN 5 20% 5980 5590 4410 3360 2600 2260	10D OF R CFS, F0 AL, IN Y CE PROBA 10 10% 7600 7600 6210 5050 3810 2970 2570	RECORD 1 R INDICA EARS, AN BILITY, 25 4% 9690 8600 6830 5780 4310 3380	1950-82 ITED RECUI IN PERCEI 50 2% 11600 9880 7200 6260 4640 3650	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL, IN PERCENTED SONT TO	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  4780 4560 4360 3310 2570 1950 1690  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6280 5980 5980 4410 3360 2600 2260  RD 1950-	TOD OF R  CFS, FO AL, IN Y CE PROBA  10 10\$ 7600 7060 6210 5050 3810 2970 2570	RECORD 1  RINDICA EARS, AN BILITY,  25  4%  9690 8600 6830 5780 4310 3380 2910	1950-82 ITED RECUI IN PERCEI 50 2% 11600 9880 7200 6260 4640 3650	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL IN PERCEN 50 2%  OF DAILY N	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4780 4560 4360 3310 2570 1950 1690  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6280 5980 5980 4410 3360 2600 2260  RD 1950-	TOD OF R  CFS, FO AL, IN Y CE PROBA  10 10\$ 7600 7060 6210 5050 3810 2970 2570	RECORD 1  RINDICA EARS, AN BILITY,  25  4%  9690 8600 6830 5780 4310 3380 2910	1950-82 ITED RECUI IN PERCEI 50 2% 11600 9880 7200 6260 4640 3650	100 13

## 14156000 MOSBY CREEK NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°44'40", long 122°59'00", in NW± sec.18, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.2 mi upstream from Kizer Creek and 5 mi southeast of Cottage Grove.

DRAINAGE AREA.--85 mi<sup>2</sup>, approximately.

778

507

364

270

210

169

107

63

37

16

12

9.1

7.5 6.3

PERIOD OF RECORD. -- February 1936 to September 1946.

GAGE. -- Staff gage. Altitude of gage is 750 ft, from topographic map.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--10 years (water years 1937-46), 191 ft3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,520 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 10.4 ft from floodmark, from rating curve extended above 2,400 ft<sup>3</sup>/s; minimum, 3 ft<sup>3</sup>/s Aug. 15, to Sept. 2, 1940.

## STATISTICAL SUMMARIES

	UNTILLY AN	ID ANNUAL	MEAN DIS	CHARGES	1937-46		MA			BILITY OF OD OF REC			)W
	MINIMUM	MAX IMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	ſ	NTERVAL,	CFS, FOR IN YEARS E PROBAB	S, AND A	NNUAL NE	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	5.5	77	28	24	.88	1.2	1	5.8	4.2	3.5	3.0		
NOVEMBER	6.3	626	252	228	•90	10.9	3	5.9	4.3	3.6	3.1		
DECEMBER	46	1143	383	368	•96	16.6	7	6.2	4.5	3.7	3.1		
JANUARY	70	779	323	238	.74	14.0	14	6.8	4.8	3.9	3.2		
FEBRUARY	110	685	432	174	-40	18.7	30	7.6	5.4	4.5	3.8		
MARCH	61	689	366 257	211	.58	15.9	60	8.9	6.5	5.6	5.1		
APRIL	66 20	644	253	188	.74	11.0	90	10	7.5	6.5	5.8		
MAY	29	264	130	81	.62	5.6	120	14	9.4	7.7	6.6		
JUNE	17	258	95	83	.87	4.1	183	42	24	17	13		
JULY	7.6	39	23	11	•50	1.0							
AUGUST	4.0	18	10	4.2		.4							
SEPTEMBER	7.2	33	12	7.7	.64	.5							
ANNUAL	113	314	191	70	.37	100							
	BASE	D ON PERI			OUS PEAK : 7-46	FLVIII	MAC			OD OF REC		HIGH FL 37-46	.OW
DISCHARGE,	, IN CFS,	D ON PERI	OD OF RE	CORD 193	7-46 INTERVAL	, IN	PERIOD (CON-	BASED DISCHA	ON PERI  RGE, IN INTERVA		INDICATE	37-46  ED RECUR ANNUAL	RENCE
DISCHARGE,	, IN CFS, AND ANNUA	D ON PERI	OD OF RE	CORD 193	7-46 INTERVAL IN PERCE	, IN	PERIOD	BASED DISCHA	ON PERI  RGE, IN INTERVA	OD OF REC	INDICATE	37-46  ED RECUR ANNUAL	RENCE
DISCHARGE, YEARS,	, IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 193	7-46 INTERVAL IN PERCE	, (N NT	PERIOD (CON-	BASED DISCHA	ON PERI  RGE, IN INTERVA	OD OF REC	INDICATE	37-46 ED RECUR ANNUAL N PERCEN	RENCE
DISCHARGE, YEARS, /	, IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF REC	INDICATE ARS, AND	37-46  ED RECUR ANNUAL N PERCEN	RENCE
DISCHARGE, YEARS, /	, IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%	OD OF REC	INDICATE ARS, AND ILITY, IN	37-46 ED RECUR ANNUAL N PERCEN	RENCE
DISCHARGE, YEARS, // 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 4340	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10%	INDICATE ARS, AND ILITY, IN	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
DISCHARGE, YEARS, / 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  50%  2720 1950	ON PERI  RGE, IN INTERVA  XCEEDANC  5 20%  4340 3030	OD OF REC CFS, FOR L, IN YE/E E PROBAB 10 10%	INDICATE ARS, AND ILITY, IN	37-46 ED RECUR ANNUAL N PERCEN	RENCE
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E-2 50% 2720 1950 1290	ON PERI  RGE, IN INTERVA  XCEEDANC  5 20%  4340 3030 1940	OD OF REC CFS, FOR L, IN YE/ E PROBAB 10 10% 5610 3840 2420	INDICATE ARS, AND ILITY, IN 25 4%	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  2720 1950 1290 898	ON PERI  RGE, IN INTERVA  XCEEDANC  5 20%  4340 3030 1940 1330	OD OF REC CFS, FOR L, IN YE/ E PROBAB 10 10% 5610 3840 2420 1660	INDICATE ARS, AND ILITY, IN	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
DISCHARGE, YEARS, // 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCHA  E 2 50%  2720 1950 1290 898 677	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 4340 3030 1940 1330 948	OD OF REC CFS, FOR L, IN YE/E E PROBAB- 10 10\$ 5610 3840 2420 1660 1130	INDICATE ARS, AND ILITY, IN 25 4 4	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
DISCHARGE, YEARS, // 1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASED  DISCHA  E  2  50%  2720 1950 1290 898 677 565	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  4340 3030 1940 1330 948 791	OD OF REC CFS, FOR L, IN YE/E E PROBABI 10 10% 5610 3840 2420 1660 1130 930	INDICATE ARS, AND ILITY, IN 25 4%	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE T
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 193 CURRENCE BABILITY,	7-46 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCHA  E 2 50%  2720 1950 1290 898 677	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 4340 3030 1940 1330 948	OD OF REC CFS, FOR L, IN YE/E E PROBAB- 10 10\$ 5610 3840 2420 1660 1130	INDICATE ARS, AND ILITY, IN 25 4 4	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI	CATED RENCE PROB	CURRENCE ABILITY,	7-46 INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCHA  E 2 50%  2720 1950 1290 898 677 565 479	ON PERI RGE, IN INTERVA XCEEDANC 5 20%	OD OF REC CFS, FOR L, IN YE/E E PROBAB 10 10% 5610 3840 2420 11660 1130 930 804	INDICATE ARS, AND ILITY, IN 25 4 4	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDI LEXCEEDA 5 20%	OD OF RECOME	CORD 193 COURRENCE HABILITY, 25 4%	7-46 INTERVAL IN PERCE 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2 50%  2720 1950 1290 898 677 565 479  OF RECOR	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 4340 3030 1940 1330 948 791 675 D 1937-4	OD OF REC  CFS, FOR L, IN YE/E PROBABI  10 10%  5610 3840 2420 1660 1130 930 804	INDICATE ARS, AND ILITY, IN 25 4%	37-46 ED RECUR ANNUAL N PERCEN 50 2%	RENCE

14156500 MOSBY CREEK AT MOUTH, NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°46'35", long 122°59'55", in SE½NW½ sec.1, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 3.5 mi southeast of Cottage Grove and at mile 1.0.

DRAINAGE AREA. -- 95.3 mi2.

PERIOD OF RECORD. -- September 1946 to September 1981. Monthly discharge only September 1946, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 676.62 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE. -- 35 years. 241 ft<sup>3</sup>/s. 34.34 in/yr. 174,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.37 ft, from rating curve extended above 4,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 2.8 ft<sup>3</sup>/s Aug. 15, 1973, Sept. 24, 1974.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1947-81 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1948-81

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	9.4	550	77	103	1.33	2.7	1	6.1	4.4	3.7	3.3	2.8	
NOVEMBER	15	1069	303	226	.75	10.5	3	6.3	4.6	3.9	3.4	3.0	
DECEMBER	28	1650	518	343	.66	17.9	7	6.7	4.9	4.2	3.7	3.2	
JANUARY	38	1014	554	320	- 58	19.1	14	7.3	5.4	4.6	4.0	3.4	
FEBRUARY	50	1012	459	216	.47	15.8	30	8.4	6.1	5.2	4.5	3.9	
MARCH	112	779	425	189	.44	14.7	60	10	7.7	6.6	5.8	5.0	
APRIL	99	596	271	122	.45	9.4	90	13	9.3	8.0	7.2	6.4	
MAY	41	486	167	102	.61	5.8	120	18	14	12	11	9.3	
JUNE	20	183	70	39	• 55	2.4	183	43	31	26	23	20	
JULY	8.7	53	22	9.1	.41	•8							
AUGUST	5.1	34	13	6.5	.51	.4							
SEPTEMBER	4.6	81	17	14	.82	.6							
ANNUAL	83	390	241	66	.27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1947-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1947-81 47

DISCHARGE, YEARS, A					NCE INTER		PERIOD (CON-		INTERV	'AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	25 4 <b>%</b>	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
3180	4830	7180	8770	10800	12300			7.40			7450		
WEIGHTED	SKEW =	166					3	3610 2710	5300 3790	6310 4400	7450 5070	8210 5490	
							7	1790	2480	2870	3320	3620	
							15	1190	1580	1800	2050	2220	
							30	901	1150	1280	1410	1500	
							60	684	887	997	1120	1190	
							90	591	753	843	942	1010	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1947-81

-			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
_	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
_	969	612	443	342	276	225	148	92	53	29	21	17	13	9 <b>.9</b>	7.4

#### 14157000 COAST FORK WILLAMETTE RIVER AT SAGINAW, OR

LOCATION.--Lat 43°50'05", long 123°02'30", in NW\ sec.15, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at Saginaw, 1.0 mi downstream from Row River.

DRAINAGE AREA . -- 529 mi2.

PERIOD OF RECORD.--October 1923 to September 1951. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 595.76 ft National Geodetic Vertical Datum of 1929. Prior to May 10, 1930, chain gage at site 50 ft upstream at different datum and May 10, 1930, to Oct. 12, 1938, at present datum.

REMARKS.--Small diversions and regulation by log ponds above station; regulation by Cottage Grove Reservoir since Oct. 31, 1942, and Dorena Reservoir since Oct. 11, 1949.

AVERAGE DISCHARGE.--28 years (water years 1924-51), 1,236  $ft^3/s$ , 894,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge,  $32,900 \text{ ft}^3/\text{s}$  Dec.  $28, 1945, \text{ gage height}, 12.38 \text{ ft}, \text{ from rating curve extended above } 24,000 \text{ ft}^3/\text{s}; \text{ minimum observed, } 15 \text{ ft}^3/\text{s} \text{ Aug. 1, Sept. 4, 1928.}$ 

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1924-42 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1925-42

	MINIMUM	148.77.841.94	M54N	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	CFS, FOR , IN YEAR CE PROBAB	S, AND A	NNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
CTOBER	43	1081	251	258	1.03	1.9	1	32	22	19	17		
10VEMBER	45	5677	1312	1449	1.10	10.0	3	33	24	20	18		
ECEMBER	396	3845	1754	916	.52	13.4	7	35	26	22	20 .		
ANUARY	516	5444	2101	1275	.61	16.0	14	38	29	26	24		
EBRUARY	660	5385	2437	1341	•55	18.6	30	43	34	31	29		
IARCH	459	4506	2004	1239	.62	15.3	60	51	39	36	34		
PRIL	509	4389	1588	976	.61	12.1	90	59	47	43	41		
ΙΑΥ	247	1904	887	484	.55	6.8	120	74	58	53	51		
UNE	115	1533	515	388	.75	3.9	183	173	122	105	95		
ULY	53	348	137	80	.58	1.0							
UGUST	33	114	65	26	.40	•5							
EPTEMBER	38	242	76	49	•64	.6							
NNUAL	621	1716	1086	355	.33	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1924-42

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1924-42

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, ÍN	OR INDICAT YEARS, AND ABILITY. I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 <b>4%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
13900	18300	24300	28300	33400									
							1	13900	18200	21000	24600		
WEIGHTE	D SKEW :	106					3	10500	14000	16200	19100		
							7	7340	9460	10700	12000		
							15	5120	6640	7560	8620		
							30	3870	4930	5 <b>5</b> 50	6240		
							60	2290	3710	4110	4550		
							90	2570	3250	3640	4080		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1924-42

		DISC	HARGE,	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4210	2780	2050	1650	1380	1140	765	471	267	134	103	79	63	51	40

## 14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

LOCATION.--Lat 43°58'50", long 122°57'55", in NW½ sec.29, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank at downstream side of bridge on State Highway 58, 2.5 mi southeast of Goshen, and at mile 6.4.

DRAINAGE AREA .-- 642 mi2.

5%

7010

10%

4660

15%

3130

20%

2290

25%

1770

30%

1390

40%

973

50%

734

60%

572

70%

446

75%

374

80%

314

85%

266

90%

223

95%

182

PERIOD OF RECORD.--August 1905 to February 1912, October 1950 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 473.80 ft National Geodetic Vertical Datum of 1929. Aug. 23, 1905, to Feb. 7, 1912, nonrecording gage at site 600 ft upstream at different datum.

REMARKS.--Flow regulated since 1942 by Cottage Grove Lake and since 1949 by Dorena Lake. Several small diversions for logponds and irrigation above station.

AVERAGE DISCHARGE.--38 years (water years 1906-11, 1951-82), 1,649 ft<sup>3</sup>/s, 1,195,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 58,500 ft $^3$ /s Nov. 22, 1909, gage height, 19.5 ft, site and datum then in use, from rating curve extended above 15,000 ft $^3$ /s; minimum, 36 ft $^3$ /s Sept. 29, 30, Oct. 11, 12, 1908.

#### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF COTTAGE GROVE AND DORENA DAMS)

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
ONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	204	3119	779	563	.72	3.9	1	157	128	114	102	90	
OVEMBER	121	6305	1948	1545	.79	9.8	3	163	135	121	110	98	
ECEMBER	196	9820	3702	2357	.64	18.7	7	172	144	129	117		
ANUARY	200	7239	3797	2116	.56	19.1	14	181	150	135	123	110	
EBRUARY	203	6891	2787	1451	.52	14.1	30	205	168	152	140	128	
IARCH	510	5716	2373	1416	.60	12.0	60	273	208	180	160	140	
PRIL	503	4020	1576	879	.56	7.9	90	352	265	226	197	169	
IAY IUNE	341	3285	988	694	•70	5.0	120	416	328	284	250	212	
IULY	218 159	1445 588	521 290	265	•51	2.6	183	520	427	386	356	326	
	147	1115	530	107 290	•37 •55	1.5 2.7							
DRAIDS I				230	• ) )								
NUGUST SEPTEMBER	171	1057	545	212	.39	2.7							
EPTEMBER	171 512 	1057 2701	1650 TY OF IN	478 	.39 .29 	100	 MA				OF ANNU	AL HIGH FI	 _OW
EPTEMBER NNUAL MAGNIT	171 512 FUDE AND BASE	1057 2701 PROBABILITO ON PERIO	1650 TY OF INDO OF RE	478 ISTANTANE CORD CURRENCE	.29	100 FLOW	MA PERIOD (CON-	BASI	HARGE, II	RIOD OF I	RECORD  OR INDIC YEARS, A	1951-82  ATED RECUIND ANNUAL	RRENCE
MAGNIT ISCHARGE, YEARS, A	171 512 FUDE AND BASE IN CFS, AND ANNUA	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478ISTANTANE CORD	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU-	BASI DISCI	HARGE, II	N CFS, FO VAL, IN	RECORD OR INDICA YEARS, A	1951-82 ATED RECUI ND ANNUAL IN PERCEI	RRENCE
EPTEMBER NNUAL MAGNIT	171 512 FUDE AND BASE IN CFS,	2701  PROBABILI D ON PERIC  FOR INDIC	1650 TY OF INDO OF RE	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON-	BASI	HARGE, II	RIOD OF I	RECORD  OR INDIC YEARS, A	1951-82  ATED RECUIND ANNUAL	RRENCE
MAGNIT ISCHARGE, YEARS, A	171 512 FUDE AND BASE IN CFS, AND ANNUA	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI 2 50%	HARGE, II INTER EXCEEDA	N CFS, FO VAL, IN 'NCE PROB 10	RECORD OR INDIC YEARS, AI ABILITY, 25 4%	1951-82  ATED RECUI ND ANNUAL IN PERCEI  50 2%	RRENCE
MAGNIT	171 512 FUDE AND BASE IN CFS, ND ANNUA 2 50%	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI	HARGE, II INTER EXCEEDA  5 20%	N CFS, FO VAL, IN N NCE PROB. 10 10%	OR INDICATE OF THE PROPERTY OF	1951-82  ATED RECUI ND ANNUAL IN PERCEI 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A	171 512 FUDE AND BASE IN CFS, ND ANNUA 2 50%	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTER EXCEEDAI  18200 14400	N CFS, FG VAL, IN NCE PROB. 10 10%	PRECORD  OR INDIC. YEARS, AI ABILITY,  25 4%  24400 18800	1951-82 ATED RECUI ND ANNUAL IN PERCEI 50 2% 26500 20300	RRENCE
MAGNIT	171 512 FUDE AND BASE IN CFS, ND ANNUA 2 50%	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI 2 50% 	HARGE, II INTER EXCEEDAI 5 20% 18200 14400 12600	N CFS, FG WAL, IN NCE PROB. 10 10% 21100 16500 14100	RECORD OR INDICA YEARS, AI ABILITY, 25 4% 24400 18800 15400	1951-82  ATED RECUI ND ANNUAL IN PERCEI 50 2%  26500 20300 16200	RRENCE
MAGNIT	171 512 FUDE AND BASE IN CFS, ND ANNUA 2 50%	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 13100 10700 9540 7580	HARGE, II INTER EXCEEDAL 5 20% 18200 14400 12600 10000	N CFS, F6 VAL, IN N NCE PROB 10 10% 21100 16500 14100 11200	RECORD  OR INDIC. YEARS, AI ABILITY,  25 4%  24400 18800 15400 12400	1951-82  ATED RECUIND ANNUAL IN PERCEI  50 2\$  26500 20300 16200 13100	RRENCE
MAGNIT	171 512 FUDE AND BASE IN CFS, ND ANNUA 2 50%	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCI 2 50% 13100 10700 9540 7580 5950	HARGE, II INTER EXCEEDAI 5 20% 18200 14400 12600 17760	N CFS, FV VAL, IN NCE PROB. 10 10% 21100 16500 14100 11200 8640	RECORD  OR INDIC YEARS, AI ABILITY,  25 4%  24400 18800 15400 12400 9490	1951-82  ATED RECUIND ANNUAL IN PERCEI  50 2\$  26500 20300 16200 13100 9970	RRENCE
MAGNIT	171 512 FUDE AND BASE IN CFS, ND ANNUA 2 50%	1057 2701 PROBABILITO ON PERIO FOR INDICAL EXCEEDAL	1650 TY OF INDD OF RE CATED RE NCE PROB	478	.29 OUS PEAK F INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH 2 50% 13100 10700 9540 7580	HARGE, II INTER EXCEEDAL 5 20% 18200 14400 12600 10000	N CFS, F6 VAL, IN N NCE PROB 10 10% 21100 16500 14100 11200	RECORD  OR INDIC. YEARS, AI ABILITY,  25 4%  24400 18800 15400 12400	1951-82  ATED RECUIND ANNUAL IN PERCEI  50 2\$  26500 20300 16200 13100	RRENCE

#### 14158000 WILLAMETTE RIVER AT SPRINGFIELD, OR

LOCATION.--Lat 44°02'45", long 123°01'40", in SE½ sec.34, T.17 S., R.3 W., Lane County, Hydrologic Unit 17090003, near center of span on downstream side of bridge on U.S. Highway 126 at Springfield, and at mile 185.6.

DRAINAGE AREA. -- 2,030 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1911 to December 1913, June 1919 to September 1957. Monthly discharge only for October 1911, published in WSP 1318. Published as "at Eugene" June 1919 to September 1928; gage-height records collected at site at Eugene since 1878 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 423.77 ft National Geodetic Vertical Datum of 1929. Nov. 27, 1911, to Dec. 31, 1913, chain gage on bridge 0.2 mi upstream at different datum. June 1, 1919, to Nov. 24, 1928, staff gage at site 3.4 mi downstream at datum 23.92 ft lower than described gage.

REMARKS.--Flow regulated by Cottage Grove (since 1942), Dorena (since 1949), and Lookout Point Reservoirs (since 1954). Small diversions for irrigation above station.

AVERAGE DISCHARGE.--40 years (water years 1912-13, 1920-57), 5,453 ft<sup>3</sup>/s, 3,948,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 140,000 ft<sup>3</sup>/s Dec. 29, 1945, gage height, 20.9 ft, from rating curve extended above 93,000 ft<sup>3</sup>/s; minimum, 500 ft<sup>3</sup>/s Aug. 11, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage recorded by U.S. Weather Bureau, 22.0 ft Jan. 25, 1903, at Eugene. Floods of Dec. 4, 1861, and Feb. 3, 1890, reached about the same stage.

### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF UPSTREAM RESERVOIRS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-42

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-42

	Management	MANAMA	M51	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		IARGE, IN INTERVAL EXCEEDAN	, IN YEA	RS, AND	ANNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	659	4999	1411	906	.64	2.4	1	650	562	527	503	480	
NOVEMBER	629	15190	5216	3887	.75	8.8	3	661	574	540	515	492	
DECEMBER	1723	15250	7184	3476	.48	12.1	7	674	584	548	522	496	
JANUARY	1961	17240	8978	4871	.54	15.2	14	691	599	562	536	511	
FEBRUARY	2733	18220	8891	4644	.52	15.0	30	734	628	583	550	518	
MARCH	2218	16890	7626	3506	•46	12.9	60	795	666	616	581	549	
APRIL .	2708	15340	7080	3050	.43	12.0	90	869	709	645	599	555	
4AY	2014	8976	5400	2230	.41	9.1	120	962	765	690	640	592	
IUNE	1121	9708	3926	2281	.58	6.6	183	1530	1130	985	886	794	
JULY	726	4399	1598	811	.51	2.7							
AUGUST	547	1482	913	239	•26	1.5							
SEPTEMBER	614	2669	989	451	• 46	1.7							
ANNUAL	2783	7247	4911	1392	.28	100							

					NCE INTER		PERIOD	DISC	INTER	VAL, IN	YEARS, A	ATED RECUIND ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 <b>4%</b>	50 2%	100
38000	50900	68100	79100	92700	103000								
WC LOUTE	D CKCM						1	44300	58400	66800	76600	83400	
WEIGHTE	D SKEW =	039					2	35000	45400	51200	57600	61800	
							7	25300	32800	36800	40900	43500	
							15	19300	24600	27600	30700	32700	
							30	14600	17800	19500	21100	22100	
							60	11300	13900	15400	17200	18300	
							90	9870	12100	13400	14900	15800	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-42

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TIME			
5	<b>%</b> 10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
14800	10900	8860	7550	6530	5670	4330	3130	2110	1360 1	160	990	856	753	666

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SEt sec.8, T.14 S., R.7 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, on west bank of Clear Lake in narrow channel, 150 ft upstream from outlet and at mile 89.6.

DRAINAGE AREA.--92.4 mi<sup>2</sup>, hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1912 to September 1915, October 1947 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 3,015.32 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). June 20, 1912, to July 31, 1915, nonrecording gage at site 1.0 mi north at different datum.

REMARKS.--Flow regulated by natural storage in lake. At high stages an undetermined flow enters numerous sinkholes in lava rock along south edge of lake above station.

AVERAGE DISCHARGE.--38 years, 469  $ft^3/s$ , 68.93 in/yr, 339,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 8.15 ft; minimum, 137 ft<sup>3</sup>/s Sept. 23, 1977, Nov. 4, 1980.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1913-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1914-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY,	ANNUAL N	0N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	145	428	262	70	•27	4.7	1	210	173	156	143	130	
NOVEMBER	163	829	379	134	. 35	6.7	3	211	174	157	144	131	
DECEMBER	209	1209	558	249	.45	9.9	7	212	175	158	145	132	
JANUARY	191	999	531	214	. 40	9.4	14	215	177	160	146	133	
FEBRUARY	180	986	531	214	.40	9.4	30	223	183	164	151	136	
MARCH	224	1205	482	179	. 37	8.6	60	237	192	172	157	141	
APRIL	341	815	574	134	.23	10.2	90	251	203	181	165	148	
MAY	370	1178	717	218	.30	12.7	120	268	215	192	174	156	
JUNE	303	1202	608	250	.41	10.8	183	315	255	230	213	195	
JULY	173	7 <b>37</b>	410	137	.33	7.3							
AUGUST	149	499	316	96	.31	5.6							
SEPTEMBER	143	392	263	67	. 25	4.7							
ANNUAL	241	683	469	102	.22	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1913-82 51

) SCHARGE, YEARS, A							PERIOD (CON-		INTERV	AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10	25 4%	50 2%	100
							1	1380	1890	2220	2630	2940	
WEIGHTED	SKEW =						3	1270	1690	1950	2260	2490	
							7	1150	1480	1690	1940	2110	
							15	1040	1270	1410	1550	1650	
							30	923	1110	1210	1310	1380	
							60	789	948	1030	1120	1180	
							90	719	852	920	989	1030	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913-82

_			DISCH	ARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME			
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
	970	819	718	641	583	531	453	404	360	314	290	269	245	220	193

#### 14158790 SMITH RIVER ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°20'05", long 122°02'45", in SW±SW± sec.24, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 200 ft upstream from Smith River Reservoir, 0.7 mi downstream from Browder Creek, 10 mi north of town of Belknap Springs, and at mile 4.4.

DRAINAGE AREA .-- 16.2 mi2.

PERIOD OF RECORD. -- October 1960 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,610.00 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Sept. 10, 1964, at datum 1.56 ft higher.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years, 91.2 ft<sup>3</sup>/s, 76.45 in/yr, 66,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,160 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.9 ft, from floodmark, from rating curve extended above 560 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 2.5 ft<sup>3</sup>/s Sept. 15-18, 1980.

STATISTICAL SIMMADIES

					5	IAIISIICA	AL SUMMARIES						
M	ONTHLY AN	ND ANNUAL	MEAN DIS	CHARGES	1961-82		MAG	SNITUDE A BASED			F ANNUAL CORD 19		W
~ ~ ~ ~ ~ ~ ~ ~ ~ ~	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	INDICATE S, AND A	NNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY	4.3 13 9.9 14	76 213 404 293	25 112 167 136	21 68 94 71	.84 .61 .56	2.2 10.2 15.2 12.4	1 3 7 14	3.8 3.8 3.9 4.2	3.2 3.3 3.3 3.5	3.0 3.0 3.1 3.2	2.8 2.8 2.9 3.1	  	
FEBRUARY MARCH APRIL MAY	13 48 50 53	309 321 260 318	134 100 133 172	84 59 53 80	.63 .59 .40 .47	12.2 9.1 12.1 15.7	30 60 90 120	4.6 5.5 7.0 10	3.9 4.6 5.5 7.3	3.6 4.3 4.9 6.3	3.4 4.1 4.5 5.5		  
JUNE JULY AUGUST SEPTEMBER	7.4 4.2 4.2	260 52 12 24	85 18 7.1 8.3	64 12 2.4 5.0	.76 .67 .33 .61	7.7 1.7 .6 .8	183 	29	20	16 	13 		
ANNUAL	39	136	91	24	.26	100							
DISCHARGE											001.0 750	51-82	
YEARS,	AND ANNUA	FOR INDI	NCE PROB	ABILITY,	IN PERCE	NT 	PERIOD (CON-		INTERVA	L, IN YE	INDICATE ARS, AND	ED RECUR	
					IN PERCE				INTERVA	L, IN YE	INDICATE ARS, AND	ED RECUR	
YEARS, 1.25	AND ANNUA	5 20%	NCE PROB 10 10%	ABILITY, 25	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	2 50%	INTERVA XCEEDANC 5 20%	L, IN YE E PROBAB 10 10%	INDICATE ARS, AND ILITY, IN	ED RECUR ANNUAL N PERCEN	T 100
YEARS, 1.25 80% 737	AND ANNUA 2 50%	5 20%	NCE PROB 10 10%	ABILITY, 25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS) 	2 50% 776 631 491 354	1130 879 650 436	10 10% 1390 1050 744 482	INDICATE ARS, AND ILITY, IN 25 4% 1750 1260 855 532	ED RECUR ANNUAL N PERCEN	T 100
YEARS, 1.25 80% 737	2 50% 1040	5 20%	NCE PROB 10 10%	ABILITY, 25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)  1 3 7	776 631 491	1130 879 650	10 10% 1390 1050 744	INDICATE ARS, AND ILITY, IN  25 4%  1750 1260 855	ED RECUR ANNUAL N PERCEN 50 2%	T 100
YEARS, 1.25 80% 737	2 50% 1040	5 20%	10 10% 2010	25 4% 2660	50 2%	NT	(CON- SECU- TIVE DAYS) 	776 631 491 354 279 212	1130 879 650 436 333 251 222	1390 1050 744 482 363 273 240	1750 1260 855 532 397 298	ED RECUR ANNUAL N PERCEN 50 2%	T 100
YEARS, 1.25 80% 737	2 50% 1040	1570 .614	NCE PROB/ 10 10% 2010 :	25 4% 2660	IN PERCEI	NT	(CON- SECU- TIVE DAYS) 	776 631 491 354 279 212 187	1130 879 650 436 333 251 222	10 10 10 10 10 10 482 363 273 240	1750 1260 855 532 397 298 261	ED RECUR ANNUAL N PERCEN 50 2%	T 100
YEARS, 1.25 80% 737	2 50% 1040	1570 .614	NCE PROB/ 10 10% 2010 :	25 4% 2660	IN PERCEI 50 2% DF DAILY )	MEAN FLOW	(CON- SECU- TIVE DAYS) 	776 631 491 354 279 212 187	1130 879 650 436 333 251 222	10 10 10 10 10 10 482 363 273 240	1750 1260 855 532 397 298 261	ED RECUR ANNUAL N PERCEN 50 2%	T 100

#### 14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM. NEAR BELKNAP SPRINGS. OR

LOCATION.--Lat 44°16'05", long 122°02'55", in T.15 S., R.6 E., (unsurveyed), Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.4 mi downstream from Trail Bridge Dam, 0.5 mi upstream from Anderson Creek, 5 mi north of town of Belknap Springs, and at mile 81.5.

DRAINAGE AREA. -- 184 mi2.

PERIOD OF RECORD. -- October 1959 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft higher.

REMARKS.--Flow regulated since 1963 by Smith River Reservoir. Diurnal fluctuations by powerplants and by Trail Bridge reregulating reservoir upstream. Water is diverted from McKenzie River in SW½ sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river above station.

AVERAGE DISCHARGE.--23 years, 1,029 ft<sup>3</sup>/s, 75.94 in/yr, 745,500 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.45 ft, from rating curve extended above 3,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 185 ft<sup>3</sup>/s Feb. 3, 1963; minimum daily, 425 ft<sup>3</sup>/s Nov. 23, 1964.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, 1	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	520	858	677	87	.13	5.5	1	561	505	477	455		
NOVEMBER	614	1361	917	226	.25	7.4	3	574	522	499	482		
DECEMBER	634	2500	1299	473	.36	10.5	7	589	537	516	502		
JANUARY	601	1932	1280	362	.28	10.4	14	608	552	530	514		
FEBRUARY	580	1813	1188	333	.28	9.6	30	624	563	538	521		
MARCH	731	2332	1116	351	.31	9.1	60	640	576	548	529		
APRIL	885	1568	1115	196	. 18	9.1	90	658	589	559	538		
MAY	834	1903	1308	339	. 26	10.6	120	680	605	573	549		
JUNE	728	1888	1119	346	-31	9.1	183	764	670	631	602		
JULY	585	1267	859	203	.24	7.0							
AUGUST	552	1034	747	154	.21	6.1							
SEPTEMBER	535	913	691	120	. 17	5.6							
ANNUAL	700	1404	1026	184	.18	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-82 53

DISCHARGE, YEARS, A			DICATED R				PERIOD (CON-		INTERV	'AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
							1	2830	4110	5020	6240		
WE I GHTED	SKEW =						3	2540	3640	4450	5580		
							7	2240	3050	3620	4400		
							15	1950	2480	2820	3240		
							30	1710	2080	2300	2550		
							60	1500	1790	1960	2160		
							90	1400	1650	1790	1960		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIM	Ε		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1790	1570	1410	1300	1210	1130	1020	929	844	763	726	691	657	613	571

#### 14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR

LOCATION.--Lat 44°10'45", long 122°07'45", on line between NEt and NWt sec.18, T.16 S., R.6 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, on left bank 1.0 mi upstream from Glen Creek, 1.7 mi east of town of McKenzie Bridge, and at mile 69 9

DRAINAGE AREA.--348 mi<sup>2</sup> at cableway 1.2 mi upstream, where all discharge measurements are made.

PERIOD OF RECORD.--August 1910 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "near McKenzie Bridge" August 1910 to September 1911 and October 1914 to September 1916.

GAGE.--Water-stage recorder. Datum of gage is 1,419.04 ft National Geodetic Vertical Datum of 1929. Prior to June 2, 1932, nonrecording gage at several sites within 2 mi of present site at various datums.

REMARKS.--Flow regulated since March 1963 by Smith River Reservoir (Carmen-Smith Project) 12 mi upstream. No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--72 years, 1.681 ft3/s, 1,218,000 acre-ft/yr.

WEIGHTED SKEW = -.029

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,100  $ft^3/s$  Dec. 22, 1964, gage height, 10.36 ft, from rating curve extended above 7,100  $ft^3/s$  on basis of slope-area measurement of peak flow; minimum, 805  $ft^3/s$  Oct. 20, 1931.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF SMITH RIVER AND TRAIL BRIDGE DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1911-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1912-62

				STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-		INTERVAL	CFS, FO , IN YEA CE PROBA	RS, AND	ANNUAL N	ON-
HONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100
OCTOBER	833	1904	1172	239	.20	5.9	1	1040	927	872	827	778	746
IOVEMBER	882	2951	1569	473	. 30	7.9	3	1040	929	873	828	779	747
ECEMBER	952	3970	1904	667	.35	9.5	7	1040	932	876	831	782	750
ANUARY	936	3557	1907	605	.32	9.6	14	1050	939	883	837	787	755
EBRUARY	1020	3443	1931	600	.31	9.7	30	1070	952	893	845	793	759
IARCH	1114	3023	1788	400	.22	9.0	60	1100	970	907	857	803	769
PRIL	1072	2632	1972	387	.20	9.9	90	1130	993	926	873	816	780
AY	1203	3422	2065	487	.24	10.3	120	1170	1020	952	897	838	800
UNE	1040	3809	1842	564	.31	9.2	183	1290	1110	1030	960	893	85
ULY	954	2333	1448	318	.22	7.3							
UGUST	871	1657	1225	196	.16	6.1							
EPTEMBER	864	1500	1138	164	. 14	5.7							
NNUAL	1098	2397	1662	264	.16	100							
DISCHARGE	BASE , IN CFS,	D ON PERI	OD OF RE	CORD 191	INTERVAL	 , IN		BASE	D ON PER	ABILITY ( IOD OF R	ECORD 19	911-62 FED RECU	
YEARS, 1	AND ANNUA	L EXCEEDA 5	NCE PROE	25	IN PERCEI	NT  100	PERIOD (CON- SECU-			AL, IN YI CE PROBAI			NT
80%	50 <b>%</b>	20 <b>%</b> 	10%	4%	2%	1%	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
4360	6390	9340 1	1400 1	4000 1	6100 18	100							

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1911-62

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICAT	ED PERCE	NT OF T	ME		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75 <b>%</b>	80%	85%	90%	95%
2870	2490	2270	2090	1960	1830	1630	1490	1370	1270	1210	1160	1110	1030	950

## 14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF SMITH RIVER AND TRAIL BRIDGE DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	44 1 N 1 M 1 H 4	MAVIMINA	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-		INTERVAL	, IN YE	ARS, AND	TED RECUI ANNUAL NO IN PERCEI	ON-
ONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100
OCTOBER	928	1365	1127	124	.11	5.4	1	970	907	883	867		
OVEMBER	1068	2425	1570	414	. 26	7.5	3	985	917	892	875		
DECEMBER	1082	4367	2298	867	.38	11.0	7	998	928	902	885		
JANUARY	1052	3370	2303	670	.29	11.0	14	1020	946	918	899		
EBRUARY	1027	3382	2084	616	.30	10.0	30	1040	965	934	913		
1ARCH	1331	3973	1920	584	.30	9.2	60	1060	982	950	927		
PRIL	1403		1887	356		9.0	90			969	945		
		2630			. 19			1090	1000				
IAY	1406	3041	2099	548	.26	10.1	120	1130	1030	994	969		
JUNE	1269	3033	1798	513	. 29	8.6	183	1260	1140	1090	1060		
JULY	1058	2053	1426	297	.21	6.8							
NUGUST	988	1670	1231	216	-18	5.9							
SEPTEMBER	954	1449	1138	161	. 14	5.4							
NNUAL	1203	2377	1739	315	. 18	100							
OISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	OUS PEAK	 , !N		BASE	D ON PER	CFS, FC	RECORD 1	L HIGH FL 964-82 TED RECUF	
SCHARGE, YEARS, A	BASE IN CFS, IND ANNUA	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	 , !N	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 1	964-82  TED RECUF	RRENCE
) SCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD CURRENCE	INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 1	964-82  TED RECUF D ANNUAL	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, IND ANNUA	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERV EXCEEDANG 5 20%	CFS, FCAL, IN YCE PROBA	DR INDICA (EARS, AN ABILITY, 25 4%	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV. EXCEEDANCE 5 20%	CFS, FCAL, IN CE PROBA	DR INDICA PEARS, AN ABILITY, 25 4%	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
SCHARGE, YEARS, A	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVALENCE DAMAGE  5 20%  8140 7150	CFS, FCAL, IN 10CE PROBA-10%	RECORD 11 OR INDICA (EARS, AN BILLITY, 25 4% 11400 10600	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2 50%  5730 4950 4190	D ON PER  ARGE, IN INTERV EXCEEDANG  5 20%  8140 7150 5730	CFS, FC AL, IN 10 CE PROBA 10 10% 9640 8640 6730	25 4% 11400 10600 7970	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  5730 4950 4190 3510	D ON PER ARGE, IN INTERV. EXCEEDANC 5 20% 8140 7150 5730 4490	CFS, FC AL, IN N CE PROBA 10 10% 9640 8640 6730 5080	DR INDICA PEARS, AN ABILITY, 25 4% 11400 10600 7970 5770	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 5730 4950 4190 3510 2970	ARGE, IN INTERVALENCE EDANG  5 20%  8140 7150 5730 4490 3640	100 OF F CFS, FC AL, IN N CE PROBA 10 10% 9640 8640 6730 5080 4040	11400 10600 7970 4500	964-82 TED RECUPD ANNUAL IN PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  5730 4950 4190 3510	D ON PER ARGE, IN INTERV. EXCEEDANC 5 20% 8140 7150 5730 4490	CFS, FC AL, IN N CE PROBA 10 10% 9640 8640 6730 5080	DR INDICA PEARS, AN ABILITY, 25 4% 11400 10600 7970 5770	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	CATED RENCE PROB	CORD COURTENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  5730 4950 4990 3510 2970 2580 2410  OF RECO	8140 7153 8140 7153 4490 3640 3100 870 870 870 870 870 870 870	100 OF F CFS, FC AL, IN N CE PROBA- 10 10% 9640 8640 6730 5080 4040 3420 3150	11400 10600 1070 10600 10600 1070 1070 1070	964-82 TED RECUPD ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, IND ANNUA 2 50%	FOR INDI L EXCEEDA	CATED RENCE PROB	CORD COURTENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2% OF DAILY	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  5730 4950 4990 3510 2970 2580 2410  OF RECO	8140 7153 8140 7153 4490 3640 3100 870 870 870 870 870 870 870	100 OF F CFS, FC AL, IN N CE PROBA- 10 10% 9640 8640 6730 5080 4040 3420 3150	11400 10600 1070 10600 10600 1070 1070 1070	964-82 TED RECUPD ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, ND ANNUA 2 50% SKEW =	D ON PERI FOR INDI L EXCEEDA 5 20%	CATED RENCE PROB	CORD CURRENCE ABILITY, 25 4% N TABLE CFS, WHI	INTERVAL IN PERCE 50 2% OF DAILY	MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)	5730 4950 4950 4950 2970 2580 2410 OF RECO	8140 7150 5736 8140 7150 5730 4490 3640 3100 2870 RD 1964-6	9640 8640 6730 5080 4040 3420 3150 82	11400 10600 7970 5770 4500 3810 3470	964-82 TED RECUPD ANNUAL IN PERCEN 50 2%	RRENCE

## 14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR

LOCATION.--Lat 44°02'50", long 122°13'00", in T.17 S., R.5 E., (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 100 ft upstream from Tipsoo Creek, 8.0 mi south of Rainbow, 9.0 mi southeast of town of Blue River, and at mile 10.4.

DRAINAGE AREA.--160  $\min^2$  at cableway 0.2  $\min$  downstream, where all discharge measurements are made.

PERIOD OF RECORD.--October 1957 to September 1982. Prior to October 1971, published as "South Fork McKenzie River above Cougar Reservoir"

GAGE.--Water-stage recorder. Datum of gage is 1,709.51 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--25 years, 637 ft3/s, 54.07 in/yr, 461,500 acre-ft/yr.

1570 1230

1040

907

807

725

587

475

366

287

263

248

233

220

206

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.06 ft, from floodmark, from rating curve extended above 7,600 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 171 ft<sup>3</sup>/s Sept. 16, 17, 1981.

#### STATISTICAL SUMMARIES

	W. M. W.	MAVIMIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT	PERIOD (CON-	DISC	INTERVAL	, IN YEA	RS, AND	ATED RECUI ANNUAL NO IN PERCEI	-AC
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	188	442	277	67	.24	3.6	1	204	190	184	178	172	
NOVEMBER	261	1121	606	281	. 46	7.9	3	204	191	184	179	173	
DECEMBER	231	2915	1001	588	.59	13.1	7	206	192	185	179	173	
IANUARY	234	1827	952	450	- 47	12.4	14	208	195	188	182	176	
EBRUARY	232	1778	889	386	.43	11.6	30	214	199	192	187	181	
MARCH	410	2065	763	335	. 44	10.0	60	221	206	199	194	188	
\PR I L	445	1391	833	225	.27	10.9	90	231	215	207	201	195	
4AY	426	1383	929	277	.30	12.1	120	242	224	217	213	209	
JUNE	298	1418	622	295	.47	8.1	183	327	283	266	255	244	
JULY	221	457	302	70	.23	3.9							
AUGUST	196	338	242	34	.14	3.2							
SEPTEMBER	197	304	236	27	.11	3.1							
ANNUAL	346	917	636	144	.23	100							
MAGNI		PROBABILI D ON PERIO			OUS PEAK 1 8-82	FLOW	MA(		AND PROB			L HIGH FI 958-82	_OW
OI SCHARGE	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD 195 CURRENCE	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER	CFS, FO	RECORD 1		RRENCE
OISCHARGE YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	OD OF RE	CORD 195 CURRENCE ABILITY,	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASE DISCH	IARGE, IN INTERV	CFS, FCAL, IN Y	RECORD 1	958-82 TED RECUI ID ANNUAL IN PERCEI	RRENCE
OISCHARGE YEARS, /	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD 195 CURRENCE	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER	CFS, FO	RECORD 1	958-82 TED RECUI	RRENCE
VISCHARGE YEARS, /	BASE , IN CFS, AND ANNUA	FOR INDIO	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN	CFS, FC AL, IN Y CE PROBA	RECORD 1	958-82 TED RECUI ID ANNUAL IN PERCEI	 RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FCAL, IN YCE PROBA	PR INDICATEARS, AN BILITY, 25 4%	958-82  ATED RECUI ID ANNUAL IN PERCEI  50 2%	RRENCE
I SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERV EXCEEDAN 5 20%	CFS, FC AL, IN Y CE PROBA 10% 7760 6430	PR INDICATEARS, AND BILITY, 25 4% 9730 8680	958-82 ITED RECULI IN PERCEN 50 2% 11200 10700	RRENCE NT 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4050 3100 2360	ID ON PER HARGE, IN INTERV EXCEEDAN 5 20% 6240 4930 3530	CFS, FC AL, IN Y CE PROBA 10 10% 7760 6430 4430	PRECORD 1 PRECOR	958-82  ITED RECUI ID ANNUAL IN PERCEI  50 2%  11200 10700 6840	100 19
1 SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4050 3100 2360 1780	ARGE, IN INTERVENCE EXCEEDAN 5 20% 6240 4930 3530 2450	T760 6430 4430 2930	PRECORD 11 PRECORD 12	958-82 ITED RECUI ID ANNUAL IN PERCEN- 50 2% 11200 10700 6840 4120	RRENCI NT 100 19
1 SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4050 3100 2360 1780 1430	ED ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6240 4930 3530 2450 1880	TOD OF FOR THE PROBLEM TO THE PROBLE	PRECORD 18 INDICA 18 INDIC	958-82  ITED RECUI ID ANNUAL IN PERCEN  50 2%  11200 10700 6840 4120 2960	100 19
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH 2 50% 4050 3100 2360 1780 1430 1180	10 ON PER 10 INTERV EXCEEDAN 5 20% 6240 4930 3530 2450 1880 1490	CFS, FC AL, IN Y CE PROBA 10 10%	PRINDICAL PRINDICAL PRINDICAL PRINDICAL PRINDICAL PRINCIPLE PRINCI	958-82  ITED RECUI ID ANNUAL IN PERCEI  50 2%  11200 10700 6840 4120 2960 2220	100 19
1 SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4050 3100 2360 1780 1430	ED ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6240 4930 3530 2450 1880	TOD OF FOR THE PROBLEM TO THE PROBLE	PRECORD 18 INDICA 18 INDIC	958-82  ITED RECUI ID ANNUAL IN PERCEN  50 2%  11200 10700 6840 4120 2960	RRENCI NT 100 19
1 SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RENCE PROB	CORD 195 CURRENCE ABILITY, 25 4% 2400 1	8-82 INTERVAL IN PERCEI 50 2% 4800	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 4050 3100 2360 1780 1430 1180	ARGE, IN INTERVEXCEEDAN  5 20\$  6240 4930 3530 2450 1880 1490	TOD OF F CFS, FC AL, IN Y CE PROBA 10 10% 7760 6430 4430 2930 2190 1710 1520	PRINDICAL PRINDICAL PRINDICAL PRINDICAL PRINDICAL PRINCIPLE PRINCI	958-82  ITED RECUI ID ANNUAL IN PERCEI  50 2%  11200 10700 6840 4120 2960 2220	RRENCI NT 100 19
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CORD 195 CURRENCE ABILITY, 25 4% 2400 1	8-82 INTERVAL IN PERCEI 50 2% 4800 OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH-250% 4050 3100 2360 1780 1430 1180 00 F RECO	IARGE, IN INTERVEXCEEDAN  5 20%  6240 4930 3530 2450 1880 1490 1350 RD 1958-	TOD OF F CFS, FC AL, IN Y CE PROBA 10 10% 7760 6430 2930 2190 1710 1520	PR INDICA PEARS, AN BILITY, 25 4% 9730 8680 5740 3590 2620 2000 1740	958-82  ITED RECUI ID ANNUAL IN PERCEI  50 2%  11200 10700 6840 4120 2960 2220	RRENCE NT 100

LOCATION.--Lat 44°08'10", long 122°14'50", in NEt sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 0.2 mi upstream from Cougar Creek, 0.6 mi downstream from Cougar Dam, 2.1 mi south of Rainbow, and

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW. OR

DRAINAGE AREA .-- 208 mi2.

5%

2390

10%

1880

15%

1590

20%

1380

25%

1220

30%

1090

40%

859

50%

672

604

503

70%

366

75%

324

80%

299

85%

278

90%

260

95%

241

PERIOD OF RECORD. -- October 1947 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,236.42 ft National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1 to Nov. 4, 1947, nonrecording gage at site 40 ft upstream at datum 0.80 ft higher.

REMARKS.--Flow regulated since 1963 by Cougar Lake, usable capacity, 165,000 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--35 years, 868 ft<sup>3</sup>/s, 56.67 in/yr, 628,900 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 8.66 ft, from rating curve extended above 8,100 ft<sup>3</sup>/s; maximum gage height, 8.90 ft Dec. 22, 1955 (backwater from debris); minimum discharge, 17 ft<sup>3</sup>/s Nov. 18, 1965; minimum daily, 85 ft<sup>3</sup>/s Apr. 26-28, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 24,500 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 8.8 ft, from floodmarks, at Corps of Engineers gage at site 40 ft upstream at datum 0.80 ft higher; gage height at present site and datum, about 9.3 ft, computed by Corps of Engineers.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF COUGAR DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1948-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1949-62

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICATARS, AND A	ANNUAL N	0N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	242	1081	472	256	.54	4.2	1	233	214	206	199		
NOVEMBER	265	1804	967	495	.51	8.7	3	235	216	207	200		
DECEMBER	444	3484	1334	794	.60	11.9	7	238	218	209	201		
JANUARY	465	2809	1211	702	. 58	10.8	14	241	221	212	205		
FEBRUARY	759	2279	1426	518	.36	12.8	30	248	229	221	214		
4ARCH	756	1921	1141	374	. 33	10.2	60	261	242	234	227		
APRIL	979	1827	1381	289	-21	12.4	90	277	254	244	237		
MAY	861	2175	1401	371	. 26	12.5	120	298	267	255	246		
JUNE	457	1796	914	394	.43	8.2	183	447	364	333	313		
JULY	272	543	373	85	.23	3.3							
AUGUST	228	323	280	27	-10	2.5							
		314	265	28	.10	2.4							
SEPTEMBER	220	214											
SEPTEMBER ANNUAL MAGNI	749  TUDE AND	1300	927 TY OF IN		.15 OUS PEAK F 8-62	100	 MA(				OF ANNUAL		 LOW
MAGNI DISCHARGE	749 TUDE AND BASE	PROBABILI D ON PERI	927 TY OF IN	ISTANTANE CORD 194	OUS PEAK F	100 FLOW	MAI	BASI	HARGE, II	N CFS, F		948-62  FED RECUR O ANNUAL	 RRENCE
MAGNI  DISCHARGE YEARS, 1	749 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	927 TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU-	BASI DISCI	HARGE, II	N CFS, FO	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	948-62 FED RECUE ANNUAL IN PERCEI	RRENCE
MAGNI MAGNI DISCHARGE YEARS,	749 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	927 TY OF IN OD OF RE	NSTANTANE CORD 194 CORRENCE COURRENCE BABILITY,	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON-	BASI	HARGE, II	N CFS, F	RECORD 19  OR INDICAT YEARS, AND	948-62  FED RECUR O ANNUAL	 RRENCE
MAGNI  DISCHARGE YEARS,	749 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	927 TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAI	N CFS, FI VAL, IN NCE PROB	RECORD 19 OR INDICA YEARS, AND ABILITY, 1 25 4%	948-62 FED RECUE O ANNUAL IN PERCEI 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	749 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	927  TY OF IN OD OF RE  CATED RE NCE PROE	STANTANE CORD 194 CCURRENCE BABILITY, 25 4%	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAI 5 20%	N CFS, FOVAL, IN STANCE PROBLEM 10 10%	RECORD 19	948-62 FED RECUR O ANNUAL IN PERCER 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	749 TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	927  TY OF IN OD OF RE  CATED RE NCE PROE	STANTANE CORD 194 CCURRENCE BABILITY, 25 4%	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAI  10500 7480	N CFS, FI VAL, IN N NCE PROB. 10 10%	RECORD 19 OR INDICA YEARS, AND ABILITY, 11  25 4%  16100 10500	948-62 TED RECUI O ANNUAL IN PERCEI 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	749 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	927  TY OF IN OD OF RE  CATED RE NCE PROE	STANTANE CORD 194 CCURRENCE BABILITY, 25 4%	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCI 2 50% 6950 5380 3790	HARGE, II INTER EXCEEDAI 5 20% 10500 7480 4910	N CFS, FF VAL, IN NCE PROB. 10 10%	RECORD 19 OR INDICA- YEARS, AND ABILITY, 1  25 4%  16100 10500 6510	948-62 FED RECUI O ANNUAL IN PERCEI 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	749 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	927  TY OF IN OD OF RE  CATED RE NCE PROE	STANTANE CORD 194 CCURRENCE BABILITY, 25 4%	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 6950 5380 3790 2740	HARGE, II INTER EXCEEDAL 5 20% 10500 7480 4910 3460	N CFS, FI VAL, IN N NCE PROB. 10 10% 13000 8830 5630 3940	OR INDICA YEARS, AND ABILITY, 1 25 4% 16100 10500 6510 4540	P48-62  IED RECUI O ANNUAL IN PERCEI  50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	749 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	927 TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 194 CCURRENCE BABILITY, 25 4%	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCI 2 50% 6950 5380 3790 2740 2240	HARGE, II INTER EXCEEDAI 5 20% 10500 7480 4910 3460 2830	N CFS, FI VAL, IN: NCE PROB. 10 103 13000 8830 5630 3940 3240	OR INDICA YEARS, AND ABILITY, 1 25 4% 16100 10500 6510 4540 3780	948-62 FED RECUI O ANNUAL IN PERCEI  50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	749 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	927 TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 194 CCURRENCE BABILITY, 25 4%	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCI 2 50% 6950 5380 3790 2740 2240 1830	HARGE, II INTER EXCEEDAI 5 20% 10500 7480 4910 3460 2830 2210	N CFS, Fi VAL, IN NCE PROB 10 10% 13000 8830 5630 3940 2460	16100 10500 6510 4540 3780 2770	P48-62  IED RECUI O ANNUAL IN PERCEI  50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	749 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	927 TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 194 CCURRENCE BABILITY, 25 4%	OUS PEAK F 8-62 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCI 2 50% 6950 5380 3790 2740 2240	HARGE, II INTER EXCEEDAI 5 20% 10500 7480 4910 3460 2830	N CFS, FI VAL, IN: NCE PROB. 10 103 13000 8830 5630 3940 3240	OR INDICA YEARS, AND ABILITY, 1 25 4% 16100 10500 6510 4540 3780	948-62 FED RECUI O ANNUAL IN PERCEI  50 2%	RRENCE

## 14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF COUGAR DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	R INDICA RS, AND A BILITY,	ANNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	185	1947	933	315	.34	9.5	1	159	116	<b></b> 97	84		
NOVEMBER	276	2403	1191	487	.41	12.1	3	185	131	107	89		
DECEMBER	210	3221	1468	818	.56	15.0	7	217	148	117	94		
JANUARY	267	3246	1286	631	.49	13.1	14	230	156	122	98		
EBRUARY	157	2030	723	592	.82	7.4	30	256	167	128	100		
MARCH	101	2571	532	542	1.02	5.4	60	304	200	158	128		
APRIL	90	885	461	233	.51	4.7	90	411	281	225	184		
4AY	158	1494	728	450	•62	7.4	120	444	310	254	214		
JUNE	250	1584	683	364	.53			553	443	396	361		
						7.0	183	223	443	296	201		
JULY	251	513	410	64	.16	4.2							
AUGUST	397	823	587	127	.22	6.0							
SEPTEMBER	560	1084	806	113	.14	8.2							
ANNUAL	453	1243	818	225	.28	100							
OISCHARGE,	BASE	O ON PERIO	OD OF RE	CORD CURRENCE	OUS PEAK I	 , IN		BASE	D ON PER  ARGE, IN	OD OF R	OF ANNUAL ECORD 19 R INDICA	964-82  TED RECUR	
DISCHARGE, YEARS, A	BASE	FOR INDIC	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON-	BASE DISCH	O ON PER ARGE, IN INTERV	OD OF R  CFS, FO AL, IN Y	ECORD 19	964-82  TED RECUR D ANNUAL	RENCE
OISCHARGE,	BASE	O ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL IN PERCEI	 , IN	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICATEARS, AND BILITY, 1	P64-82 FED RECURD ANNUAL IN PERCEN	RRENCE
OISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASE DISCH	O ON PER ARGE, IN INTERV	CFS, FO AL, IN Y	ECORD 19 R INDICATEARS, AND	964-82 FED RECUR O ANNUAL IN PERCEN	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICATEARS, AND BILITY, 1	P64-82 FED RECURD ANNUAL IN PERCEN	RRENCE
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50\$	O ON PER  ARGE, IN INTERV. EXCEEDANN  5 20%	CFS, FO AL, IN Y CE PROBA 10 10 5930	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	FED RECUF O ANNUAL IN PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4530 4100	D ON PER ARGE, IN INTERV EXCEEDANN 5 20% 5590 5350	CFS, FO AL, IN Y CE PROBA 10 10 5930 5860	R INDICATE EARS, AND BILITY, 25 4% 6150 6280	FED RECUF O ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50\$ 4530 4100 3340	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 5590 5350 4640	CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350	ECORD 19 R INDICATE ARS, AND BILITY, 125 4% 6150 6280 6090	FED RECUF O ANNUAL IN PERCEN 50 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  4530 4100 3340 2550	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 5590 5350 4640 3660	CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350 4410	ECORD 19	FED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH  2 50  4530 4100 3340 2550 1950	D ON PER  ARGE, IN INTERV EXCEEDAN  520\$  5590 4640 3660 2680	CFS, FO AL, IN Y CE PROBA  10 10\$ 5930 5860 5350 4410 3170	R INDICATE ARS, AND BILITY, 125 4%	FED RECURD ANNUAL IN PERCENSON 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASE DISCH  2 50 4530 4100 3340 2550 1950 1520	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20\$  5590 5350 4640 3660 2680 2070	CFS, FO AL, IN Y CE PROBA 10 10 5860 5350 4410 3170 2480	ECORD 19  R INDICATE ARS, AND BILITY, 10  25  4\$  6150 6280 6090 5350 3800 3050	FED RECURD ANNUAL IN PERCENSON 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC L EXCEEDAL	OD OF RECEIVED RESIDENCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH  2 50  4530 4100 3340 2550 1950	D ON PER  ARGE, IN INTERV EXCEEDAN  520\$  5590 4640 3660 2680	CFS, FO AL, IN Y CE PROBA  10 10\$ 5930 5860 5350 4410 3170	R INDICATE ARS, AND BILITY, 125 4%	FED RECURD ANNUAL IN PERCENSON 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASE  DISCH  2 50\$  4530 4100 3340 2550 1950 1950 1360	ARGE, IN INTERV. EXCEEDAN.  5 20\$  5590 5350 4640 2680 2070 1840	CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350 4410 3170 2480 2170	ECORD 19  R INDICATE ARS, AND BILITY, 10  25  4\$  6150 6280 6090 5350 3800 3050	FED RECURD ANNUAL IN PERCENSON 2%	100 1%
1.25 80%	BASE	FOR INDIG	CATED RE CATED RE NCE PROB	CORD  CURRENCE ABILITY, 25 4% N TABLE	INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50\$  4530 3340 2550 1950 1520 0F RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20 \$ 5590 5350 4640 3660 2680 2070 1840  RD 1964-1	CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350 4410 3170 2480 2170	ECORD 19 R INDICATE ARS, AND BILITY, 125 4% 6150 6280 6090 5350 3800 3050 2610	FED RECURD ANNUAL IN PERCENSON 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIG	CATED RE CATED RE NCE PROB	CORD  CURRENCE ABILITY, 25 4% N TABLE	INTERVAL IN PERCEI 50 2% OF DAILY !	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  4530 3340 2550 1950 1520 0F RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20 \$ 5590 5350 4640 3660 2680 2070 1840  RD 1964-1	CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350 4410 3170 2480 2170	ECORD 19 R INDICATE ARS, AND BILITY, 125 4% 6150 6280 6090 5350 3800 3050 2610	FED RECURD ANNUAL IN PERCENSON 2%	100 1%

# WILLAMETTE RIVER BASIN 14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR

WILLAMETTE RIVER BASIN 59

LOCATION.--Lat 44°13'05", long 122°15'50", in SE½NE½ sec.36, T.15 S., R.4 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.2 mi downstream from Tidbits Creek, 5.5 mi northeast of town of Blue River, and at mile 8.5.

DRAINAGE AREA .-- 45.8 mi2.

PERIOD OF RECORD. -- September 1963 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,386.90 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 259 ft<sup>3</sup>/s, 76.80 in/yr, 187,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 15.32 ft, from floodmarks, from rating curve extended above 2,800 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 8.2 ft<sup>3</sup>/s Sept. 28, 29, Oct. 2-4, 1965.

#### STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN ( INTERVAL, EXCEEDANCI	IN YEARS	, AND AN	INUAL N	-NC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	12	180	 73	52	.72	2.3	1	12	10.0	9.2	8.7		
NOVEMBER	46	731	327	212	.65	10.4	3	12	10	9.4	8.8		
DECEMBER	33	1471	598	352	.59	19.0	7	13	10	9.6	9.1		
JANUARY	48	1033	540	293	.54	17.2	14	13	11	10	9.4		
FEBRUARY	65	914	430	235	.55	13.7	30	15	12	11	10		
MARCH	128	995	340	203	.60	10.8	60	18	14	13	12		
APRIL	147	529	330	110	.33	10.5	90	23	17	15	14		
MAY	100	521	281	127	.45	8.9	120	30	23	20	17		
JUNE	45	320	130	83	.64	4.1	183	68	49	41	35		
JULY	23	73	39	15	.37	1.2							
AUGUST	13	52	23	9.4	.41	.7							
SEPTEMBER	11	82	30	21	. 69	1.0							
ANNUAL	106	404	261	76	.29	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-82

DISCHARGE, YEARS, A				RECURRENC ROBABILIT			PERIOD (CON-	DISCH	INTERV	'AL, ÎN Y	OR INDICAT EARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 <b>4%</b>	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
2830	4080	6180	7850	10300				7440	4770	5040	7700		
WEIGHTED	SKEW =	.471					3	3110 2340	4770 3550	5910 4370	7390 5410		
							7 15	1740 1130	2450 1540	2870 1770	3330 2030		
							30	860	1150	1310	1490		
							60 90	656 580	869 755	1000 864	1170 997		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-82

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEED	ED FOR INDICATE	D PERCENT 0	F TIME		
5% 10% 15% 20% 25% 30% 40% 50%	60% 70%	75% 8	0% 85%	90%	95%
905 587 450 377 317 270 200 140	85 <b>4</b> 6	35 2	7 22	18	14

#### 14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR

LOCATION.--Lat 44°12'35", long 122°15'20", in T.15 or 16 S., R.5 E. (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 6.0 mi northeast of town of Blue River, and at mile 0.5.

DRAINAGE AREA. -- 24.1 mi2.

PERIOD OF RECORD.--August 1949 to September 1955, September 1963 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,377.76 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--25 years, 127 ft<sup>3</sup>/s, 71.56 in/yr, 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,660 ft $^3$ /s Dec. 22, 1964, gage height, 8.88 ft, from rating curve extended above 1,300 ft $^3$ /s, on basis of slope-area measurement of peak flow; minimum, 4.8 ft $^3$ /s Sept. 16, 17, 1981.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1950-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1951-82

	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	8.9	179	41	43	1.04	2.7	1	9.3	7.5	6.6	5.9	5.2	
NOVEMBER	10	322	142	95	.67	9.3	3	9.4	7.6	6.7	6.0	5.2	
DECEMBER	20	794	252	166	.66	16.5	7	9.7	7.8	6.8	6.1	5.4	
JANUARY	25	591	259	141	.54	17.0	14	10	8.2	7.3	6.6	5.8	
FEBRUARY	27	435	216	105	.49	14.2	30	11	9.0	8.1	7.4	6.6	
MARCH	61	420	164	84	•51	10.7	60	13	10	9.4	8.5	7.7	
APRIL	70	282	167	56	•33	10.9	90	15	12	11	9.9	9.0	
MAY	55	255	146	60	.41	9.6	120	18	15	13	12	12	
JUNE	30	212	81	50	.62	5.3	183	35	26	23	21	19	
JULY	16	46	27	9.1	.34	1.8							
AUGUST	9.6	22	16	3.6	.23	1.0							
SEPTEMBER	8.6	41	16	6.8	.42	1.1							
ANNUAL	49	182	127	33	.26	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1950-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1950-82

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	'AL, ÍN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
1200	1750	2680	3440	4560	5520								
NE LOUTED	CKEM	404					1	1380	2110	2560	3090	3460	
WEIGHTED	SKEW =	- 494					2	1030	1560	1910	2340	2650	
							7	734	1070	1280	1530	1710	
							15	503	701	822	964	1060	
							30	399	539	624	721	788	
							60	306	400	457	524	571	
							90	277	354	396	444	475	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1950-82

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FO	R INDICATED PERCENT OF TIME
5% 10% 15% 20% 25% 30% 40% 50% 60%	70% 75% 80% 85% 90% 95%
417 285 226 189 161 140 105 76 49	27 22 18 16 13 11

#### 14162000 BLUE RIVER NEAR BLUE RIVER, OR

LOCATION.--Lat 44°10'55", long 122°16'45", in NWt sec.13, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 2.5 mi downstream from Lookout Creek, 3.3 mi upstream from Quartz Creek, 3.5 mi northeast of town of Blue River, and at mile 5.1.

DRAINAGE AREA. -- 75.0 mi2.

PERIOD OF RECORD. -- September 1935 to September 1964. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage Is 1,231.62 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--29 years (water years 1936-64), 393 ft<sup>3</sup>/s, 284,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,300 ft $^3$ /s Dec. 28, 1945, gage height, 9.80 ft, from rating curve extended above 7,400 ft $^3$ /s; minimum, 11 ft $^3$ /s Aug. 21, 22, 1961.

#### STATISTICAL SUMMARIES

	ONTHLY AN	ND ANNUAL	MEAN DIS	SCHARGES	1936-64		MA		AND PROB			AL LOW FLO 1937-64	OW
	MINIMUM	MAXIMUM	 MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YEA	ARS, AND	ATED RECUI ANNUAL NO IN PERCEI	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	18	622	153	169	1.10	3.2	1	20	16	15	14	13	
NOVEMBER	18	1356	516	338	.66	10.9	3	20	17	15	14	13	
DECEMBER	139	1668	690	436	-63	14.6	7	21	17	16	15	14	
JANUARY	69	1821	641	399	.62	13.5	14	22	18	17	16	15	
FEBRUARY	238	1456	705	310	.44	14.9	30	25	20	18	17		
MARCH	165	1062	580	221	.38	12.2	60	30	24	21	19	17	
APRIL	164	1089	623	207	.33	13.2	90	36	27	24	21	19	
MAY	123	819	461	212	•46	9.7	120	48	34	28	25	21	
JUNE	50	553	225	135	.60	4.8	183	113	76	62	53	44	
JULY	26	137	69	26	• 37	1.5							
AUGUST	18	54	35	9.6	• 27	.7							
SEPTEMBER	20	121	38	22	.58	.8							
ANNUAL  MAGN I T					.22 OUS PEAK (6-64	100 	 MA(					AL HIGH FL 1936-64	. <b></b>
MAGNIT	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE	ISTANTANE CORD 1936	0US PE <b>A</b> K 1 6-64	FLOW	 PERIOD (CON-	BASE	D ON PER HARGE, IN INTERV	CFS, FO	ECORD R INDICA		RRENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 1936 CURRENCE BABILITY,	OUS PEAK 16-64  INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU-	BASE DISCH	ID ON PER	CFS, FO	ECORD R INDICA EARS, AI	1936-64  ATED RECUF ND ANNUAL IN PERCEN	RRENCE
MAGNII DISCHARGE, YEARS, A	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 1936 CURRENCE BABILITY,	OUS PEAK 6-64 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON- SECU- TIVE	DISCH	ED ON PER HARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	R INDICA EARS, AI BILITY,	1936-64  ATED RECUF ND ANNUAL IN PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 1936 CURRENCE BABILITY,	OUS PEAK 16-64  INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU-	BASE DISCH	ID ON PER	CFS, FO	ECORD R INDICA EARS, AI	1936-64  ATED RECUF ND ANNUAL IN PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 1936 CCURRENCE SABILITY, 25 4%	OUS PEAK 16-64  INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	ED ON PER HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD R INDICA EARS, AI BILITY, 25 4%	1936-64  ATED RECUP ND ANNUAL IN PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 1936 CCURRENCE SABILITY, 25 4%	OUS PEAK 6-64 INTERVAL IN PERCE 50 2%	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	RECORD REARS, AI BILITY, 25 4%	1936-64  ATED RECUF ND ANNUAL IN PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 1936 CCURRENCE SABILITY, 25 4%	OUS PEAK 6-64 INTERVAL IN PERCE 50 2%	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA 10 10 7760 5370	RECORD RINDICATERS, AI BILITY, 25 4% 9630 6450	1936-64  ATED RECUF ND ANNUAL IN PERCEN  50 25  11100 7270	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 1936 CCURRENCE SABILITY, 25 4%	OUS PEAK 6-64 INTERVAL IN PERCE 50 2%	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	IARGE, IN INTERVENTE EXCEEDAN 5 20% 6360 4520 2950	CFS, FO AL, IN Y CE PROBA 10 10\$ 7760 5370 3390	ECORD  RE INDICA FEARS, AI BILITY, 25 4% 9630 6450 3910	1936-64  ATED RECUF ND ANNUAL IN PERCEN 50 25 11100 7270 4260	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 1936 CCURRENCE SABILITY, 25 4%	OUS PEAK 6-64 INTERVAL IN PERCE 50 2%	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASE  DISCH  2 50%  4380 3260 2220 1550	ARGE, IN INTERVEX EXCEEDAN 5 20% 6360 4520 2950 2050	CFS, FO AL, IN Y CE PROBA 10 10% - 7760 5370 3390 2360	R INDIC/ EARS, AI BILITY, 25 4% 9630 6450 3910 2740	1936-64  ATED RECUP ND ANNUAL IN PERCEN  50 2\$  11100 7270 4260 3010	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 1936 CCURRENCE SABILITY, 25 4%	OUS PEAK 6-64 INTERVAL IN PERCE 50 2%	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4380 3260 2220 1550 1200	ED ON PER  INTERV EXCEEDAN  5 20%  6360 4520 2950 2050 1590	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10\$  7760 5370 3390 2360 1810	R INDICA EARS, AI BILITY, 25 4% 9630 6450 3910 2740 2070	1936-64  ATED RECUP ND ANNUAL IN PERCEN 50 2% 11100 7270 4260 3010 2250	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 1936 CCURRENCE SABILITY, 25 4%	OUS PEAK 6-64 INTERVAL IN PERCE 50 2%	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH 2 50% 4380 3260 2220 1550 1200 938	HARGE, IN INTERVEX EXCEEDAN 4520 2950 2050 1590 1200	10D OF R  CFS, F0 AL, IN Y CE PROBA  10 10\$  7760 5370 3390 2360 1810 1350	R INDIC/ EARS, AI BILITY, 25 4% 9630 6450 3910 2740 2070 1530	1936-64  ATED RECUF ND ANNUAL IN PERCEN 50 2% 11100 7270 4260 3010 2250 1640	RRENCE
MAGNITONISCHARGE, YEARS, A	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE	ISTANTANE CORD 1930 CURRENCE BABILITY, 25 4%	OUS PEAK 16-64 INTERVAL IN PERCE 50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH  2 50%  4380 3260 2220 1550 1200 938 855	HARGE, IN INTERVEXCEEDAN  5 20%  6360 4520 2950 1590 1200 1050	CFS, FO AL, IN Y CE PROBA  7760 5370 3390 2360 1810 1350 1160	R INDICA EARS, AI BILITY, 25 4% 9630 6450 3910 2740 2070	1936-64  ATED RECUP ND ANNUAL IN PERCEN 50 2% 11100 7270 4260 3010 2250	RRENCE
MAGNITODISCHARGE, YEARS, A	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20% 8220 026	TY OF IN OD OF RE	STANTANE CORD 1930 CURRENCE BABILITY, 25 4% 2100 1:	OUS PEAK 16-64 INTERVAL IN PERCE 50 2% 3700	FLOW  IN  I100  11%   MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH  2 50%  4380 3260 2220 1550 1200 938 855	HARGE, IN INTERVEXCEEDAN  5 20%  6360 4520 2950 2050 1590 1200 1050  RD 1936-	10D OF R  CFS, F0 AL, IN Y CE PROBA  10 10%  7760 5370 3390 2360 1810 1350 1160	R INDIC/ EARS, AI BILITY, 25 4% 9630 6450 3910 2740 2070 1530	1936-64  ATED RECUF ND ANNUAL IN PERCEN 50 2% 11100 7270 4260 3010 2250 1640	RRENCE

#### 14162200 BLUE RIVER AT BLUE RIVER, OR

LOCATION.--Lat 44°09'45", long 122°19'55", in NW±SE± sec.21, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 0.3 mi upstream from Simmonds Creek, 0.7 mi north of town of Blue River, 0.8 mi downstream from Blue River Dam, and at mile 0.9.

DRAINAGE AREA .-- 87.7 mi2.

1830

1070

782

658

576

526

PERIOD OF RECORD. -- February 1966 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,056.53 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Aug. 25, 1966, nonrecording gage at datum 0.80 ft higher.

REMARKS.--Flow regulated since October 1968 by Blue River Lake. No diversion above station. Discharge not adjusted for storage or release from Blue River Lake as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--16 years, 469 ft<sup>3</sup>/s, 339,800 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,270 ft $^3$ /s Feb. 23, 1968, gage height, 8.93 ft; minimum, 0.80 ft $^3$ /s Oct. 8, 10, 11, 1968; minimum daily, 3.7 ft $^3$ /s Oct. 8, 1968.

#### STATISTICAL SUMMARIES

						TATISTICAL							
М	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1969-82		MAC				OF ANNUAL		W
	Meantaillia	MAY I MIN		STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	DISCH	INTERVAL	., IN YEA	R INDICAT RS, AND A	NNUAL N	-NC
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	71	429	232	110	.47	4.0	1	25	15	12	9.1		
NOVEMBER	130	1459	580	357	.62	10.1	3	27	16	12	9.2		
DECEMBER	63	2189	1182	599	.51	20.5	7	29	16	12	8.9		
JANUARY	68	1371	893	425	. 48	15.5	14	37	21	15	11		
FEBRUARY	33	1167	466	384	.82	8.1	30	56	27	17	12		
MARCH	12	1766	379	473	1.25	6.6	60	114	55	35	24		
APRIL	12	577	304	194	.64	5.3	90	195	97	61	40		
MAY	35	676	370	213	• 58	6.4	120	291	175	116	75		
JUNE	64	516	241	131	.54	4.2	183	310	218	163	121		
JULY	99	626	375	168	.45	6.5							
AUGUST	326	765	485	113	.23	8.4							
SEPTEMBER		536	246	133	.54	4.3							
ANNUAL	192	727	481	147	•31	100							
					INTERVAL IN PERCE		PERIOD (CON-		INTERV	AL, IN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	RENCE
1.25 80%	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100 1%	SECU-		 5	10	<b>2</b> 5		IT
						177	TIVE	7				50	
							TIVE DAYS)	2 50%	20%	10%	4%	50 2%	100 1%
										10%			100
							DAYS)	50%					100
							DAYS) 	50%	20%			2% 	100
		 					DAYS)  1 3 7	50%  2840	20%  3310	  3390	4%   3410	2% 	100
							DAYS) 	50%  2840 2130	20%  3310 2540	3390 2650	4%   3410 2710	2% 	100
	 	 					DAYS) 1 3 7 15	50%  2840 2130 1590	20%  3310 2540 2000	3390 2650 2170	4%  3410 2710 2310	2%   	100
							DAYS)  1 3 7 15 30	50%  2840 2130	20%  3310 2540	3390 2650	4%   3410 2710	2% 	100
	<del></del>	 		N TABLE		MEAN FLOW	DAYS)  1 3 7 15 30 60	50%	20%  3310 2540 2000 1550 1290	3390 2650 2170 1740 1440	4%  3410 2710 2310 1930	2% 	100
		DISCHAF	DURATIO		OF DAILY !		DAYS)  1 3 7 15 30 60 90	50%  2840 2130 1590 1190 1000  OF RECO	20% 3310 2540 2000 1550 1290 RD 1969-	3390 2650 2170 1740 1440	4%  3410 2710 2310 1930 1590	2% 	100

301

215

133

413

97

69

56

50

39

#### WILLAMETTE RIVER BASIN 63 14162500 MCKENZIE RIVER NEAR VIDA. OR

LOCATION.--Lat 44°07'30", long 122°28'10", in NE1NE1 sec.5, T.17 S., R.3 E., Lane County, Hydrologic Unit 17090004, on right bank 0.4 mi downstream from Mason Creek, 5.4 mi east of Vida, and at mile 47.7.

DRAINAGE AREA.--930 mi<sup>2</sup> at cableway 0.4 mi downstream, where all discharge measurement are made.

PERIOD OF RECORD.--July 1910 to March 1911 (published as "at Martins Rapids, near Vida"), September 1924 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 855.71 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). July 1, 1910, to Mar. 31, 1911, nonrecording gage at site 3 mi downstream at different datum. Sept. 1, 1924, to Nov. 16, 1928, nonrecording gage at site 20 ft upstream at datum 0.15 ft lower. Nov. 17, 1928, to Sept. 23, 1968, water-stage recorder at present site on left bank at datum 0.15 ft lower.

REMARKS.--Flow regulated since 1963 by Smith River Reservoir and Cougar Lake, and since 1968 by Blue River Lake. No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--58 years (water years 1925-82), 4,036 ft<sup>3</sup>/s, 2,924,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge,  $64,400 \text{ ft}^3/\text{s}$  Dec. 28, 1945, gage height, 17.70 ft, site and datum then in use, from rating curve extended above  $32,000 \text{ ft}^3/\text{s}$ ; minimum, 1,260 ft<sup>3</sup>/s Nov. 7, 1930, Sept. 17, Oct. 4, 8, 9, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1923 reached a stage of 17.2 ft, from floodmarks, discharge, 62,000 ft3/s.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF SMITH RIVER, COUGAR, AND BLUE RIVER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1926-62

			MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	., IN YEA	RS, AND	TED RECUI ANNUAL NO IN PERCE	0 <b>N-</b>
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1330	5062	2169	876	.40	4.5	1	1560	1390	1310	1250	1190	
NOVEMBER	1367	8573	4140	2106	.51	8.6	3	1570	1400	1320	1260	1190	
DECEMBER	1840	13770	5395	2742	.51	11.2	7	1580	1400	1320	1260	1200	
JANUARY	1658	11570	5327	2387	. 45	11.1	14	1600	1420	1340	1270	1200	
EBRUARY	2343	10560	5659	2209	.39	11.8	30	1640	1450	1360	1290	1210	
MARCH	2250	9749	5177	1542	.30	10.8	60	1700	1490	1390	1320	1240	
APRIL	2312	7496	5368	1316	.25	11.2	90	1770	1530	1420	1340	1260	
YAY	2528	8394	5018	1510	.30	10.4	120	1880	1610	1480	1390	1300	
JUNE	1750	8986	3853	1533	.40	8.0	183	2330	1900	1710	1580	1450	
JULY	1505	3589	2374	547	.23	4.9							
AUGUST	1361	2578	1889	317	.17	3.9							
SEPTEMBER	1314	2371	1764	268	.15	3.7							
ANNUAL	2476	6211	4001	843	.21	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1925-62

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1925-62

DISCHARGE YEARS,					ICE INTER		PERIOD (CON-	DISC	INTER	VAL, IN	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20%	10 10%	25 4 <b>%</b>	50 2% 	100 15 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
20100	28700	40300	47800	56900	63500								
							1	24200	33600	39300	46000	50600	
WEIGHTE	D SKEW =	197					3	19000	25900	30200	35300	38900	
							7	14300	18500	20900	23500	25300	
							15	10800	13700	15300	17000	18200	
							30	8690	10800	12100	13500	14400	
							60	7220	8850	9810	10900	11700	
							90	6620	7960	8700	9500	10000	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-62

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCENT	F OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
8980	7130	6220	5580	5040	4580	3800	3130		2190 2			1750	1630	1470

## 14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

STATISTICAL SUMMARIES (AFTER THE COMPLETION OF SMITH RIVER, COUGAR, AND BLUE RIVER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	_, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
CTOBER	1706	3676	275 <b>7</b>	456	.17	5.6	1	1810	1590	1500	1430		
IOVEMBER	2413	7477	4408	1517	.34	8.9	3	1860	1630	1530	1460		
ECEMBER	1865	14430	6766	3321	.49	13.7	7	1970	1690	1570	1480		
ANUARY	1752	11180	6554	2340	.36	13.3	14	2040	1760	1640	1550		
EBRUARY	1542	87 <b>7</b> 2	4851	1896	.39	9.8	30	2190	1880	1730	1620		
IARCH	2414	11210	4284	1993	.47	8.7	60	2300	1980	1850	1740		
PRIL	2671	5681	3951	956	.24	8.0	90	2400	2080	1940	1820		
IAY	2421	6567	4342	1363	.31	8.8	120	2470	2180	2050	1950		
UNE	2180	6604	3608	1272	.35	7.3	183	2710	2410	2280	2190		
ULY	1813	3529	2654	447	- 17	5.4							
UGUST	1824	3510	2631	506	.19	5.3							
EPTEMBER	1874	3358	2575	388	.15	5.2							
NNUAL	2447	5823	4115	910	•22	100							
	BASE	PROBABILIT D ON PERIC FOR INDIC	DD OF RE	CORD			MA(	BASE	D ON PER	RIOD OF F	RECORD 1	L HIGH FI 964-82 TED RECUI	
I SCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD  CURRENCE	INTERVAL IN PERCE	. IN	PERIOD (CON- SECU-	BASE	ARGE, IN	RIOD OF F	RECORD 1	964-82	 RRENCE
SCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN	I CFS, FO	RECORD 1  OR INDICA (EARS, AN ABILITY,  25	964-82  TED RECUI D ANNUAL IN PERCEN	RRENCE
SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASE DISCH	ID ON PER	CFS, FO	RECORD 1	964-82 TED RECUI ID ANNUAL IN PERCEI	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, F( VAL, IN ) ICE PROBA  10 10%	DR INDICA PEARS, AN ABILITY, 25 4% 29000	964-82 LITED RECUID ANNUAL IN PERCEI 50 2%	RRENCE
SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVENCE EXCEEDAN 5 20%	I CFS, FC IAL, IN ) ICE PROBA 10 10 25200 22800	PRECORD 1 PRECOR	964-82  TED RECUI D ANNUAL IN PERCEN	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVENCEDAN 5 20% 21800 19000 16400	I CFS, F( VAL, IN ) ICE PROBA  10 10%	29000 27500 21600	964-82 LITED RECUID ANNUAL IN PERCEI 50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 15700 13200 12000 10500	HARGE, IN INTERVEXCEEDAN 20% 21800 19000 16400 13600	1 CFS, FC AL, IN 1 ICE PROBA 10 10 25200 22800 18900 15300	29000 27500 21600 16900	964-82 LITED RECUID ANNUAL IN PERCEI 50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVEXCEEDAN 5 20% 21800 19000 16400 13600 11200	I CFS, FC IAL, IN 1 ICE PROBA 10 25200 22800 18900 15300 12600	29000 27500 21600 14300	964-82 LITED RECUID ANNUAL IN PERCEI 50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 15700 13200 12000 10500	HARGE, IN INTERVEXCEEDAN 20% 21800 19000 16400 13600	1 CFS, FC AL, IN 1 ICE PROBA 10 10 25200 22800 18900 15300	29000 27500 21600 16900	964-82  ITED RECUI D ANNUAL IN PERCEI  50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVEXCEEDAN 5 20% 21800 19000 16400 13600 11200	I CFS, FC IAL, IN 1 ICE PROBA 10 25200 22800 18900 15300 12600	29000 27500 21600 14300	964-82  ITED RECUI D ANNUAL IN PERCEI  50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	CATED RE	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 15700 13200 12000 12000 8550 7140 6510	ARGE, IN INTERVEXCEEDAN  21800 19000 16400 11200 9300 8360	I CFS, FC (AL, IN ) (CE PROBA)  10 10 25200 22800 22800 18900 15300 12600 10600 9430	RECORD 1  RECORD	964-82  ITED RECUI D ANNUAL IN PERCEI  50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RE CATED RE NCE PROB	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 15700 13200 10500 8550 7140 6510 OF RECC	ARRGE, IN INTERVEXCEEDAN  21800 19000 16400 113600 11200 9300 8360	10 CFS, FC (AL, IN ) (CE PROBA-10) (10%	25 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	964-82  ITED RECUI D ANNUAL IN PERCEI  50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RE CATED RE NCE PROB	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2% OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 15700 13200 10500 8550 7140 6510 OF RECC	ARRGE, IN INTERVEXCEEDAN  21800 19000 16400 113600 11200 9300 8360	10 CFS, FC (AL, IN ) (CE PROBA-10) (10%	25 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	964-82  ITED RECUI D ANNUAL IN PERCEI  50 2%	 RRENCE

#### 14163000 GATE CREEK AT VIDA, OR

LOCATION.--Lat 44°08'45", long 122°34'15", in SWL sec.28, T.16 S., R.2 E., Lane County, Hydrologic Unit 17090004, on right bank 300 ft downstream from bridge on State Highway 126, at Vida, and at mile 0.2.

DRAINAGE AREA .-- 47.6 mi 2.

PERIOD OF RECORD. -- June 1951 to September 1957; annual maximums, water years 1958-65; August 1966 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 764.56 ft National Geodetic Vertical Datum of 1929. June 11, 1951, to Sept. 30, 1957, water-stage recorder, and Oct. 1, 1957, to Aug. 1, 1966, crest-stage gage at same site and datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years (water years 1952-57, 1967-82), 214 ft<sup>3</sup>/s, 61.05 in/yr, 155,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.18 ft, from slope-area measurement of peak flow; minimum, 12 ft<sup>3</sup>/s Nov. 26, 27, 1952.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1952-82 MAGNITUDE AND PR

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1953-82 65

OCTOBER NOVEMBER DECEMBER	17 19 33	253 70 <b>4</b> 927	72 244 461	57 179 223	.79 .73	2.8 9.5 17.9	DAYS)  1 3 7	50%  17 18 18	20%  15 15 15	10% 14 14 14	5% 13 13 13	2 <b>%</b>   	1%  
JANUARY FEBRUARY MARCH APRIL	53 60 110 124	879 769 644 515	455 380 348 267	230 170 154 87	.51 .45 .44	17.7 14.8 13.5 10.4	14 30 60 90	19 21 25 28	16 18 20 23	15 16 18 20	14 15 17	  	
MAY	74 54	274 184	154 91	59 38	.38	6.0 3.5	120 183	33 59	27 45	24 39	22 35		
JUNE JULY AUGUST	30 19	93 62	43 29	14 9.4		1.7 1.1							
JUNE JULY RUGUST SEPTEMBER ANNUAL MAGNIT	30 19 18 92 FUDE AND BASE	62 71 318 	29 31 214 	9.4 14 59 	.32 .46 .27 	1.1 1.2 100 	 MAG	BASE	D ON PER	10D OF R	OF ANNUAL ECORD 19	52-82	
UNE ULY UGUST SEPTEMBER NNUAL MAGNIT	30 19 18 92 FUDE AND BASE IN CFS,	62 71 318 PROBABILI D ON PERIO FOR INDIG L EXCEEDA	29 31 214 TY OF IN OD OF RE	9.4 14 59 ISTANTANE CORD 195 CURRENCE	.32 .46 .27 OUS PEAK F 2-82 INTERVAL, IN PERCEI	1.1 1.2 100 \$\infty\$LOW	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO		52-82 ED RECUR ANNUAL	RENCE
JUNE JULY LUGUST SEPTEMBER LINNUAL MAGNIT	30 19 18 92 TUDE AND BASE	62 71 318 	29 31 214 TY OF IN OD OF RE	9.4 14 59 ISTANTANE CORD 195	.32 .46 .27 OUS PEAK F 2-82 INTERVAL, IN PERCEI	1.1 1.2 100 	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	ECORD 19  R INDICAT EARS, AND	52-82 ED RECUR ANNUAL	RENCE
UNE ULY ULY UGUST EPTEMBER  NNUAL  MAGNIT  ISCHARGE, YEARS, A  1.25 80%	30 19 18 92 FUDE AND BASE IN CFS, NND ANNUA	62 71 318 PROBABILI' D ON PERIO FOR INDIO L EXCEEDAD	29 31 214 TY OF IN DD OF RE CATED RE NCE PROB	9.4 14 59 ISTANTANE CORD 195 CURRENCE BABILITY,	.32 .46 .27 OUS PEAK I 2-82 INTERVAL, IN PERCEI	1.1 1.2 100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, 1	ED RECUR ANNUAL N PERCEN 50 2%	RENCE
UNE ULLY ULGUST BEPTEMBER NNUAL MAGNIT TISCHARGE, YEARS, A 1.25 80%	30 19 18 92 FUDE AND BASE IN CFS, AND ANNUA 2 50%	62 71 318 PROBABILI' D ON PERIO FOR INDIO L EXCEEDAD	29 31 214 TY OF IN DD OF RE CATED RE NCE PROE	9.4 14 59 ISTANTANE CORD 195 CURRENCE SABILITY, 25 4%	.32 .46 .27 OUS PEAK I 2-82 INTERVAL, IN PERCEI	1.1 1.2 100 	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, 1	ED RECUR ANNUAL N PERCEN	RENCE

 		DISCH	ARGE, IN	CFS, WH	ICH WAS	EQUALED (	R EXCEEDE	D FOR I	NDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 768	506	390	322	271	229	168	116	74	48	39	32	27	23	20

#### 14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'34", long 122°57'20", in SE¼NW½ sec.17, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 50 ft downstream from bridge, 1.3 mi northeast of Springfield, and at mile 1.59.

DRAINAGE AREA . -- 177 mi2.

PERIOD OF RECORD. -- September 1935 to September 1952, October 1963 to September 1982. Prior to October 1935 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 442.47 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1935, to Sept. 30, 1952, nonrecording gage at same site and datum.

REMARKS. -- Many diversions for irrigation above station.

AVERAGE DISCHARGE. -- 36 years, 535 ft<sup>3</sup>/s, 41.05 in/yr, 387,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 22.60 ft; minimum, 8.2 ft<sup>3</sup>/s Sept. 9, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached at stage of 22.9 ft, from floodmark, probably affected by backwater from McKenzie River, discharge, 9,200 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

MONTH	MINIMOM	MAXIMUM (CFS)	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU-	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	MINIMUM (CFS)		MEAN (CFS)	(CFS)	ATION		TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	27	719	127	165	1.30	2.0	1	20	15	12	11	9.0	
NOVEMBER	27	1653	597	462	.77	9.3	3	21	15	13	11	9.7	
DECEMBER	53	3197	1179	743	.63	18.3	7	22	16	14	12	10	
JANUARY	84	2464	1304	671	.51	20.2	14	23	17	15	13	11	
FEBRUARY	126	2016	1106	454	.41	17.2	30	26	19	17	15	13	
MARCH	281	1975	885	408	.46	13.7	60	32	24	20	18	15	
APRIL	242	1545	581	277	.48	9.0	90	38	28	24	21	19	
MAY	118	710	334	138	-41	5.2	120	47	35	30	27	24	
JUNE	54	581	183	104	.57	2.8	183	98	69	58	50	42	
JULY	34	186	72	34	. 48	1.1							
AUGUST	15	91	37	18	.47	.6							
SEPTEMBER	19	112	42	23	.54	.6							
ANNUAL	164	847	535	157	.29	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82

ISCHARGE, YEARS, AI							PERIOD (CON-		INTERV	AL, ÍN	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
4100	6020	8620	10300	12400	13900				~~~~				
WE I GHTED	SKEW =	238					3	5360 4380	7640 6200	8850 7180	10100 8180	10800 8790	
							7	3390	4610	5250	5910	6320	
							15	2510	3290	3680	4070	4290	
							30	1950	2440	2650	2840	2930	
							60	1520	1940	2140	2330	2440	
							90	1350	1720	1910	2080	2190	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

			DISCH	ARGE, IN	CFS, W	HICH WAS	EQUALED	OR EXCEED	ED FOR	INDICATED	PERCENT	OF TIME			
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2	2030	1410	1060	825	672	563	383	247	143	79	60	46	37	30	24

67

#### 14165500 MCKENZIE RIVER NEAR COBURG. OR

LOCATION.--Lat 44°06'45", long 123°02'45", in NW&NE& sec.9, T.17 S., R.3 W., Lane County, Hydrologic Unit 17090004, on left bank at downstream side of Armitage Bridge, 2 mi southeast of Coburg, and at mile 7.1.

DRAINAGE AREA .-- 1.337 mi2.

PERIOD OF RECORD. -- October 1944 to September 1972.

15%

9570

8510

7650

6940

14900 11200

GAGE.--Water-stage recorder. Datum of gage is 392.32 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1944, nonrecording gage at same site at datum 4.00 ft higher. Nov. 25, 1944, to Feb. 28, 1965, water-stage recorder at same site at datum 4.00 ft higher.

REMARKS.--Flow regulated since 1963 by Smith River Reservoir and Cougar Lake, and since 1968 by Blue River Lake. Slight diurnal fluctuation caused by logponds and powerplants upstream. Water supply for city of Eugene is diverted 10 mi upstream; small diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years, 5,916 ft<sup>3</sup>/s, 60.09 in/yr, 4,286,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,200 ft3/s Dec. 29, 1945, gage height, 21.36 ft, from rating curve extended above 59,000 ft3/s; minimum, 1,080 ft3/s Aug. 19, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD. -- Flood stage of 22.2 ft was reached in December 1861, 21.8 ft in February 1890, and 20.1 ft in January 1943 (information from Corps of Engineers), all at present datum.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1945-63 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1946-63 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE STAN-INTERVAL, IN YEARS, AND ANNUAL NON-COEFFI- PERCENT DARD PERIOD DEVIA-CLENT OF ΟF (CON-EXCEEDANCE PROBABILITY. IN PERCENT MINIMUM MAYIMUM MEAN TION VARI-ANNHAL SECII-MONTH (CFS) ATION RUNOFF TIVE 20 50 100 (CFS) (CES) (CFS) 10 DAYS) 50% 20% 10% 5% 2% 1% OCTOBER 3110 1503 4.3 1610 1530 1470 NOVEMBER 1933 12180 6309 2945 .47 8.7 1820 1640 1560 1490 DECEMBER 2061 20700 9198 4566 -50 12.7 1840 1660 1570 1500 JANUARY 3308 18020 8763 4058 .46 12.1 14 1870 1690 1600 1530 FEBRUARY 5607 17200 10210 3135 .31 30 1930 1740 1570 14.1 1640 MARCH 2010 5565 13290 8296 2166 .26 60 1810 1720 1640 1790 APRIL 5787 9913 7862 1221 .16 10.8 90 2120 1900 1710 MAY 3599 10130 7053 1665 .24 9.7 120 2310 2040 1920 1820 JUNF 3204 7377 4725 1332 .28 6.5 3070 2700 2450 183 2550 JULY 2041 3773 2811 512 .18 3.9 AUGUST .13 1657 2682 2146 280 3.0 SEPTEMBER 1605 2440 2022 221 .11 2.8 ANNUAL 4575 8275 6018 836 .14 100 MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1945-63 BASED ON PERIOD OF RECORD 1945-63 DISCHARGE. IN CFS. FOR INDICATED RECURRENCE INTERVAL. IN DISCHARGE, IN CFS, FOR INDICATED RECURRENCE YEARS. AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT (CON-1.25 25 50 100 SECU-10 50% 20% 10% 4% 2% 1% TIVE 10 25 100 DAYS) 50% 20% 10% 4% 2% 1% 36500 50500 69000 80900 95600 42000 56900 66200 WEIGHTED SKEW = -.121 33100 43900 51000 59900 \_\_ 23800 30100 34000 38700 \_\_ 15 17600 21900 24400 27300 \_\_ 30 14100 17500 19700 22500 13800 15400 17500 \_\_ 11400 90 10600 12400 13500 15000 DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1945-63 DISCHARGE. IN CFS. WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME 5% 10% 20% 25% 30% 95%

40%

5780

50%

4780

60%

3650

70%

75%

80%

85%

90%

#### 14166000 WILLAMETTE RIVER AT HARRISBURG, OR

LOCATION.--Lat 44°16'14", long 123°10'21", in NW±NE± sec.16, T.15 S., R.4 W., Linn County, Hydrologic Unit 17090003, on right bank 75 ft north of intersection of First Street and Kesling Street in Harrisburg and at mile 161.0.

DRAINAGE AREA. -- 3,420 mi<sup>2</sup>, approximately.

36500 27900 20600 16200

13500 11800

9530

8180

7170

6240

5790

5430

5100

4750

4290

PERIOD OF RECORD.--October 1944 to September 1982. Gage-height records collected at same site in 1927-28, 1931, 1934, are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 288.39 ft National Geodetic Vertical Datum of 1929. Oct 1 to Nov. 14, 1944, nonrecording gage at bridge 1,110 ft upstream at different datum. Nov. 15, 1944, to Aug. 15, 1973, at site 1,100 ft upstream at datum 2,00 ft higher.

REMARKS.--Flow regulated by 8 reservoirs above station. Many small diversions above station for irrigation.

AVERAGE DISCHARGE.--38 years, 12,250 ft3/s, 8,875,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000  $ft^3/s$  Dec. 29, 1945, gage height, 19.69 ft, from rating curve extended above 115,000  $ft^3/s$ ; minimum, 1,990  $ft^3/s$  Oct 30, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 20.5 ft was reached in December 1861, and 20.1 ft in February 1890 (information from Corps of Engineers). Flood of Jan. 1, 1943, reached a stage of 19.1 ft from National Weather Service.

## STATISTICAL SUMMARIES

Mo	NTHLY AN	D ANNUAL	MEAN DIS	CHARGES	1969-82			Dito	ED ON PEI				
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICAT ARS, AND A ABILITY,	ANNUAL NO	0N-
<b>1</b> ONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
CTOBER	6978	9745	8116	948	.12	5.6	1	4250	3530	3080	2700		
IOVEMBER ECEMBER	6584	28860	14180	7049	.50	9.7	3	4360	3600	3130 3190	2730 2780		
ANUARY	3848 3695	42980 36750	24930 23710	10750 10160	.43 .43	17.1 16.3	7 14	4480 4570	3670 3740	3270	2880		
EBRUARY	2859	26010	15260	7330	.48	10.5	30	4680	3890	3450	3080		
IARCH	5897	36070	13850	8313	.60	9.5	60	4890	4110	3730	3430		
PRIL	4823	17520	10950	4021	.37	7.5	90	5220	4360	3940	3610		
IAY	4207	12850	9430	2884	.31	6.5	120	5630	4760	4340	4020		
IUNE	3809	12540	7493	2718	•36	5.1	183	6510	5540	5080	4720		
IULY	3883	6283	5051	774	.15	3.5							
NUGUST	4533	7117	5534	769	.14	3.8							
EPTEMBER	5020	8986	7131	1176	. 16	4.9							
LI I LIIDLII													
NNUAL	5233 TUDE AND	17800		3512 	.29 	100	 MA				OF ANNUAL		 _O <b>W</b>
MAGNIT ISCHARGE, YEARS, A	5233 TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	3512 ISTANTANE CORD CURRENCE	OUS PEAK	100 FLOW , IN	PERIOD (CON-	BAS	ED ON PER  HARGE, IN INTER	RIOD OF F		969-82 FED RECUI	RRENCE
MAGNIT  ISCHARGE,  YEARS, A	5233 TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU-	DISCI	HARGE, INTERN	RIOD OF I	RECORD 19 DR INDICAT YEARS, AND ABILITY, 1	069-82 FED RECUI O ANNUAL IN PERCEN	RRENCE
MAGNIT ISCHARGE, YEARS, A	5233 TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	3512 ISTANTANE CORD CURRENCE	OUS PEAK	100 FLOW , IN	PERIOD (CON-	BAS	ED ON PER  HARGE, IN INTER	RIOD OF F	RECORD 19 DR INDICAT YEARS, AND	969-82 FED RECUI	RRENCE
MAGNIT  ISCHARGE,  YEARS, A	5233 TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE	DISCI	HARGE, INTERNET	RIOD OF E N CFS, FO VAL, IN N NCE PROBA	RECORD 19 DR INDICAT YEARS, AND ABILITY, 1	FED RECUI ANNUAL IN PERCEN	RRENCE
MAGNIT ISCHARGE, YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAN 5 20%	N CFS, FO VAL, IN N NCE PROBA 10%	RECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%	FED RECUI ANNUAL IN PERCEN	RRENCE
MAGNIT  ISCHARGE,  YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, IN INTER EXCEEDAN  5 20%  68600 60900	N CFS, F6 VAL, IN N NCE PROB/ 10 10%	RECORD 19 DR INDICAT YEARS, AND ABILITY, 19 25 44 72200 64000	DED RECUI D ANNUAL IN PERCEN 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 56900 50700 46500	HARGE, IN INTERN EXCEEDAN 5 20% 68600 60900 55100	N CFS, F6 VAL, IN N NCE PROB/ 10 10%	OR INDICATE AND A STATE AND A	069-82 FED RECUI O ANNUAL IN PERCEI 50 2%	100 19
MAGNIT ISCHARGE, YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 56900 50700 46500 40600	HARGE, II INTER EXCEEDAN 5 20% 68600 60900 55100 48900	N CFS, F6 VAL, IN N NCE PROB/ 10 10% 71100 63100 56700 50700	DR INDICAT YEARS, AND ABILITY, 1 25 4% 72200 64000 57400 51500	P69-82  FED RECUI  ANNUAL  N PERCEI  50  2%	100 19
MAGNIT ISCHARGE, YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 56900 50700 46500 34100	HARGE, II INTER: EXCEEDAN  5 20%  68600 60900 55100 48900 41500	N CFS, FO (AL, IN ) (NCE PROB/ 10 10% 10% 10% 10% 10% 10% 10% 10% 10% 1	72200 64000 57400 51500 44300	ied recui o annual in percei 50 2%	100 19
MAGNIT ISCHARGE, YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	3512 ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 56900 50700 46500 40600	HARGE, II INTER EXCEEDAN 5 20% 68600 60900 55100 48900	N CFS, F6 VAL, IN N NCE PROB/ 10 10% 71100 63100 56700 50700	DR INDICAT YEARS, AND ABILITY, 1 25 4% 72200 64000 57400 51500	P69-82  FED RECUI  ANNUAL  N PERCEI  50  2%	100 19
MAGNIT ISCHARGE, YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE	3512  ISTANTANE  CORD  CURRENCE  ABBILITY,  25  4\$	OUS PEAK I	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 56900 50700 46500 46500 34100 27600 24200	HARGE, II INTER' EXCEEDAN 5 20% 68600 60900 55100 41500 35100 31100	71100 63100 56700 43400 33500	72200 64000 57400 44300 39600	ied recui o annual in percei 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A	5233  "UDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILID ON PERI	TY OF IN OD OF RE	3512  ISTANTANE CORD  CCURRENCE SABILITY,  25 4%	OUS PEAK INTERVAL IN PERCE 50 2%	TOO  FLOW  IN  IN  IN  IN  IM  IM  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	56900 50700 40500 40500 27600 24200 OF RECC	HARGE, II INTER' EXCEEDAN 5 20% 68600 60900 55100 41500 35100 31100 DRD 1969-	71100 63100 56700 43400 33500	72200 64000 57400 51500 44300 39600 35200	ied recui o annual in percei 50 2%	100 13

#### 14166500 LONG TOM RIVER NEAR NOT!, OR

LOCATION.--Lat 44°03'00", long 123°25'30", in sec.33, T.17 S., R.6 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi upstream from Southern Pacific Railroad bridge, 0.8 mi downstream from Noti Creek, 1.3 mi southeast of Noti, and at mile 37.4.

DRAINAGE AREA.--89.3 mi2.

922

611

442

349

281

226

PERIOD OF RECORD. -- October 1935 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 389.05 ft National Geodetic Vertical Datum of 1929 (levels by National Weather Service). Prior to Nov. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Slight regulation caused by logpond above Noti. No diversion above station.

AVERAGE DISCHARGE.--47 years, 234 ft<sup>3</sup>/s, 35.58 in/yr, 169,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 20.17 ft; minimum, 0.04 ft<sup>3</sup>/s Aug. 13, 1977.

STATISTICAL SUMMARIES

MARCH 137 923 424 197 .46 15.1 60 16 11 8.8 7.0 5.3 4. APRIL 57 684 260 136 .52 9.3 90 18 13 11 9.0 7.3 6. MAY 55 340 127 53 .42 4.5 120 21 16 13 11 9.4 8. JUNE 25 164 64 23 .37 2.3 183 38 28 24 21 18 16 JULY 6.2 65 30 10 .35 1.1 AUGUST 3.6 33 17 6.5 .38 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 SKEW.  ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1.25 2 5 10 25 50 100 SECU- 80% 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 BOS 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 WEIGHTED SKEW =359  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME							STATISTIC	AL SUMMARIE	S							
DARD   COEFFI	М	ONTHLY AN	ND ANNUAL	MEAN DI	SCHARGES	1936-82		M/						OW		
MONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 2 5 10 20 50 100 20 50 100 CONTROL (CFS) (CFS) (CFS) (CFS) (CFS) ATION RUNOFF DAYS 50 50 20 50 100 20 50 100 20 50 100 20 50 100 20 50 100 20 50 100 20 100 20 115 20 20 100 20 115 20 20 100 20 115 20 20 100 20 115 20 20 100 20 115 20 20 100 20 115 20 20 100 20 115 20 20 20 100 20 20 115 20 20 20 100 20 20 20 20 20 20 20 20 20 20 20 20 2			MAVIMUM	MEAN	DARD DEVIA-	CIENT O	F OF	(CON-	DISCH	INTERVAL, IN YEARS, AND ANNUAL NON-						
NOVEMBER 17 708 200 172 86 7.1 3	МОИТН							TIVE								
DECEMBER 24 1425 472 337 7.71 16.8 7	OCTOBER	12	300	42	50	1.17	1.5	1								
JANUARY 25 1260 603 352 -98 21.5 14	NOVEMBER	17	708	200	172	.86	7.1	3								
FEBRUARY 63 1093 552 241 .44 19.7 30 15 9.6 6.5 4.3 2.5 1.1  MARCH 137 923 424 197 .46 15.1 60 16 11 8.8 7.0 5.3 4.  APRIL 57 684 260 136 .52 9.3 90 18 13 11 9.0 7.3 6.  MAY 55 340 127 53 .42 4.5 120 21 16 13 11 9.4 8.  MAY 55 340 127 53 .42 4.5 120 21 16 13 11 9.4 8.  JUNE 25 164 64 23 .37 2.3 183 38 28 24 21 18 16  JULY 6.2 65 30 10 .35 1.1  AUGUST 3.6 33 17 6.5 .38 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 SKEW.  ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTATANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DI SCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD CONTROL PROBABILITY,	DECEMBER	24	1425	472	337	.71	16.8	7								
MARCH 137 923 424 197 46 15.1 60 16 11 8.8 7.0 5.3 4. APRIL 57 684 260 136 .52 9.3 90 18 13 11 9.0 7.3 6. MAY 55 340 127 53 .42 4.5 120 21 16 13 11 9.4 8.2 JUNE 25 164 64 23 .37 2.3 183 38 28 24 21 18 16 JULY 6.2 65 30 10 .35 1.1 AUGUST 3.6 33 17 6.5 .38 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 SKEW.  ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT 1.25 2 5 10 25 50 100 SECU- 80% 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 BOS 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 WEIGHTED SKEW =359  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	JANUARY	25	1260	603	352	.58	21.5	14								
APRIL 57 684 260 136 .52 9.3 90 18 13 11 9.0 7.3 6. MAY 55 340 127 53 .42 4.5 120 21 16 13 11 9.0 7.3 6. MAY 55 340 127 53 .42 4.5 120 21 16 13 11 9.4 8.2 JUNE 25 164 64 23 .37 2.3 183 38 28 24 21 18 16 JULY 6.2 65 30 10 .35 1.1 MAGNITUDE AND PROBABILITY OF ANNUAL TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 18 1.5 .7 .32 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 NOTE: LOW-FLOW SEPTEMBER 7.4 NOTE: L	FEBRUARY	63	1093	552	241	.44	19.7	30	15	9.6	6.5	4.3	2.5	1.6		
MAY 55 340 127 53 .42 4.5 120 21 16 13 11 9.4 8.7  JUNE 25 164 64 25 .37 2.3 183 38 28 24 21 18 16  JULY 6.2 65 30 10 .35 1.1  AUGUST 3.6 33 17 6.5 .38 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 SKEW.  ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1.25 2 5 10 25 50 100  80\$ 50\$ 20\$ 10\$ 4\$ 2\$ 1\$ 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			923	424	197	.46	15.1	60	16	11	8.8	7.0	5.3	4.3		
JUNE 25 164 64 23 .37 2.3 183 38 28 24 21 18 16  JULY 6.2 65 30 10 .35 1.1  AUGUST 3.6 33 17 6.5 .38 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 SKEW.  ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1.25 2 5 10 25 50 100  80\$ 50\$ 20\$ 10\$ 4\$ 2\$ 1\$ 10\$ 100	APRIL	57	684	260	136	.52	9.3	90	18	13	11	9.0	7.3	6.3		
JULY 6.2 65 30 10 .35 1.1 AUGUST 3.6 33 17 6.5 .38 .6 NOTE: LOW-FLOW STATISTICS UNCERTAIN DUE TO EXCESSIVE SEPTEMBER 7.4 31 18 5.7 .32 .6 SKEW.  ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT (CON-CON-CON-CON-CON-CON-CON-CON-CON-CON-	MAY	55	340	127	53	.42	4.5	120	21	16	13	11	9.4	8.2		
ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1.25 2 5 10 25 50 100 SECU-  1.25 2 5 10 25 50 100 SECU-  1.25 2 5 10 25 50 100 SECU-  1.25 2 5 10 25 50 100 SECU-  1.25 2 5 10 25 50 100 SECU-  1.25 2 5 10 25 50 100 SECU-  1.25 2 5 10 25 50 100 SECU-  1.26 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100  DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100  DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100  WEIGHTED SKEW =359  3 2270 3280 3860 4500 4910 5280  TO SECU-  1 2830 4140 4900 5730 6270 6740  WEIGHTED SKEW =359  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82	JUNE	25	164	64	23	.37	2.3	183	38	28	24	21	18	16		
SEPTEMBER   7.4   31   18   5.7   32   .6   SKEW.	JULY	6.2	65	30	10	. 35	1.1									
ANNUAL 46 424 233 78 .33 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD (CON- 1.25 2 5 10 25 50 100 SECU- 25 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 1% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 11% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 11% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 11% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 11% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 11% TIVE 2 5 100 DAYS) 50% 20% 10% 4% 2% 11% TIVE 2 5 100 DAYS) 50% 20% 10% 40% 20% 20% 10% 40% 20% 20% 20% 10% 40% 20% 20% 20% 20% 20% 20% 20% 20% 20% 2	AUGUST	3.6	33	17	6.5	. 38	.6	NOTE:	LOW-FLOW	STATIST	ICS UNCE	RTAIN DU	E TO EXC	ESSIVE		
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1.25 2 5 10 25 50 100 80% 50% 20% 10% 4% 2% 1% 11VE 2 5 10 25 50 100 AYS) 50% 20% 10% 4% 2% 1% 11VE 2 5 10 25 50 100 AYS) 50% 20% 10% 4% 2% 1% 15  1990 3120 4690 5700 6940 7830 8690  WEIGHTED SKEW =359  WEIGHTED SKEW =359  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82	SEPTEMBER	7.4	31	18	5.7	.32	.6		SKEW.							
BASED ON PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1, 25	ANNUAL	46	424	233	78	.33	100									
80% 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 100   DAYS) 50% 20% 10% 4% 2% 1% 1990 3120 4690 5700 6940 7830 8690    WEIGHTED SKEW =359	YEARS,	, IN CFS,	FOR INDI	CATED RE	CURRENCE BABILITY,	INTERVAL	ENT	(CON-	DISCH	IARGE, IN	CFS, FO	R INDICA EARS, AN	TED RECU			
DAYS) 50% 20% 10% 4% 2% 1%  1990 3120 4690 5700 6940 7830 8690    1 2830 4140 4900 5730 6270 6740									2	5	10	25	50	100		
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WEIGHTED SKEW =359  3 2270 3280 3860 4500 4910 5280 7 1640 2330 2720 3150 3440 3690 15 1180 1610 1840 2090 2240 2370 30 900 1180 1320 1460 1540 1610 60 701 916 1020 1120 1170 1220 90 620 814 904 987 1030 1070  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	1990	3120	4690	5700	6940	7830 8	8690									
7 1640 2330 2720 3150 3440 3690 15 1180 1610 1840 2090 2240 2370 30 900 1180 1320 1460 1540 1610 60 701 916 1020 1120 1170 1220 90 620 814 904 987 1030 1070  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME								1	2830	4140	4900	5730	6270	6740		
15 1180 1610 1840 2090 2240 2370 30 900 1180 1320 1460 1540 1610 60 701 916 1020 1120 1170 1220 90 620 814 904 987 1030 1070  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	WEIGHTED	SKEW =	359					3	2270	3280	3860	4500	4910	5280		
15 1180 1610 1840 2090 2240 2370 30 900 1180 1320 1460 1540 1610 60 701 916 1020 1120 1170 1220 90 620 814 904 987 1030 1070  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME								7	1640	2330	2720	3150	3440	3690		
30 900 1180 1320 1460 1540 1610 60 701 916 1020 1120 1170 1220 90 620 814 904 987 1030 1070  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME								15	1180							
90 620 814 904 987 1030 1070  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME								60	701	916	1020	1120	1170	1220		
DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME								90	620	814	904	987	1030	1070		
				DURAT10	N TABLE (	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	RD 1936-8	2					
5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75% 90% 95% 90% 95%			DISCHAF	RGE, IN	CFS, WHIC	CH WAS EQ	UALED OR	EXCEEDED FO	R INDICA	TED PERCE	NT OF T	 IME				
	 5 <b>%</b>	10%	15%	20%	25 <b>%</b>	30%	40% 5	60% 60%	70%	 75%	80%	85%	90%	95%		

92

33

26

22

18

15

12

### 14167000 COYOTE CREEK NEAR CROW. OR

LOCATION.--Lat 44°01'19", long 123°15'17", in SW±NE± sec.11, T.18 S., R.5 W., Lane County, Hydrologic Unit 17090003, on right bank 1.0 mi downstream from Spencer Creek, 4.3 mi northeast of Crow, and at mile 3.8.

DRAINAGE AREA .-- 95.1 mi2.

PERIOD OF RECORD. -- July 1940 to September 1982.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 374.0 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 31, 1940, nonrecording gage near same site at different datums.

REMARKS.--No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 178 ft3/s, 25.42 in/yr, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,600 ft $^3$ /s Feb. 10, 1961, gage height, 14.43 ft, from rating curve extended above 4,700 ft $^3$ /s; no flow at times most years.

STATISTICAL SUMMARIES

M	ONTHLY AN	ID ANNUAL	MEAN DISC	CHARGES	1941-82		M	AGNITUDE BASE			OF ANNUAL		WC
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICA RS, AND A	ANNUAL N	⊃N
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER	0.0 2.5	378 881	21 155	66 175	3.20 1.13	1.0	1 3	 				 	
DECEMBER JANUARY FEBRUARY	3.1 4.0 12	1926 1067 1171	474 534 418	392 331 242	.83 .62 .58	22.1 24.9 19.5	7 14 30						
MARCH APRIL MAY	68 19 14	683 536 301	305 154 61	175 114 55	•57 •74 •90	14.2 7.2 2.9	60 90 120	.9 1.7	-	.1	-	0.0 .2	0.
JUNE JULY AUGUST	3.2 .1 0.0	61 11 4.6	16 3.6 .9	10 2.7 1.1	.61 .73 1.29	.8 .2 0.0	183  NOTE:	7.7 SHORT-DU	RATION S			1.7 AIN DUE	1. 10
SEPTEMBER ANNUAL	0.0	5.3 361	1.1	1.2 67	1.08	100		EXCESSIV	E ZERO EV	VENTS.			
	AND ANNUA	L EXCEED/	ANCE PROBA	BILITY,	IN PERCE	NT 	PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20% 	10 10%	25 4% 	50 2 <b>%</b> 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
2000 WEIGHTED	4080 SKEW =		10300 13	800 10	5500 192	200	1 3 7 15	3390 2580 1760 1180	5600 4040 2660 1710	6860 4820 3140 1980	8190 5600 3620 2240	9000 6060 3910 2390	9680 6430 4150 2510
							30 60 90	855 669 566	1170 876 735	1310 944 790	1420 989 824	1480 1010 836	1520 1020 843
			DURATION	TABLE	OF DAILY M	MEAN FLOW	FOR PERIOD	OF RECO	RD 1941-8	32			
		DISCHA	RGE, IN C	FS, WHIC	CH WAS EQU	JALED OR	EXCEEDED FO	R INDICA	TED PERCE	NT OF T	1 ME		
5%	10%	DISCHA 15%		FS, WHIO  25%	·		EXCEEDED FO	70%	TED PERCE 75%	80%	1ME  85%	90%	95%

# WILLAMETTE RIVER BASIN 14169300 AMAZON CREEK AT EUGENE, OR

LOCATION.--Lat 44°00'45", long 123°04'35", in SW±SE± sec.8, T.18 S., R.3 W., Lane County, Hydrologic Unit 17090003, on right bank 145 ft south of intersection of 39th Street and E. Amazon Drive in Eugene, and at mile 20.3.

DRAINAGE AREA .-- 3.35 mi2.

5%

25

10%

14

15%

20%

5.7

25%

4.2

30%

3.2

PERIOD OF RECORD. -- October 1962 to September 1975.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 442.33 ft National Geodetic Vertical Datum of 1929.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--13 years, 5.24 ft3/s, 21.24 in/yr, 3,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 527 ft<sup>3</sup>/s Jan. 19, 1964, gage height, 7.29 ft; no flow at times.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1963-75 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1964-75 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-COFFE I-PERCENT PERIOD DARD EXCEEDANCE PROBABILITY, IN PERCENT CIENT OF DEVIA-OF (CON-MINIMUM MAXIMUM ANNUAL SECU-MEAN VARI-TION MONTH (CES) (CES) (CES) ATION RUNOFE 50 100 (CES) TIVE DAYS) 50% 20% 10% 2% 1% OCTOBER 1.1 0.0 5.8 NOVEMBER 23 1.00 9.2 3 0.0 0.0 0.0 --\_\_ DECEMBER 4.5 33 14 7.9 .57 22.1 0.0 0.0 0.0 TANHARY 2.3 27 18 7.7 . 43 28.2 14 0.0 0.0 0.0 FEBRUARY 2.6 21 8.4 5.5 .65 13.3 30 . 2 . 1 0.0 0.0 \_\_ \_\_ MARCH 60 . 2 1.2 18 8.8 5.4 .61 14.0 . 1 APRIL 12 . 2 .8 3.5 90 4.3 .83 6.8 .2 MAY . 3 8.7 1.21 3.0 120 . 2 1.9 2.3 JUNE .2 1.2 .5 .3 .60 .8 183 JULY .3 .5 .6 .41 . 1 . 1 AUGUST .9 .72 .4 .3 .6 . 1 SEPTEMBER .8 .3 . 2 .5 .62 ANNUAL .33 2.3 5.2 1.7 8.8 100 MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1963-75 BASED ON PERIOD OF RECORD 1963-75 DISCHARGE, IN CFS. FOR INDICATED RECURRENCE INTERVAL. IN DISCHARGE, IN CFS, FOR INDICATED RECURRENCE YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT (CON-SECU-10 50 100 50% 20% 2% 10% 4% TIVE 2 100 1% 10% DAYS) 50% 20% 4% 2% 1% 198 270 437 521 126 WEIGHTED SKEW = .011 3 86 130 154 181 --7 58 83 96 110 \_\_ 15 50 31 59 36 35 69 30 23 --\_\_ 41 60 23 26 28 18 DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1963-75

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

50%

60%

70%

75%

.3

80%

85%

90%

95%

40%

#### 14170000 LONG TOM RIVER AT MONROE. OR

LOCATION.--Lat 44°18'50", long 123°17'45", in NE<sup>1</sup>/<sub>4</sub> sec.33, T.14 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank in canalized river channel at Monroe, 110 ft upstream from bridge on State Highway 99W, 0.1 mi downstream from Shafer Creek, and at mile 6.8.

DRAINAGE AREA .-- 391 mi2.

PERIOD OF RECORD.--November 1920 to July 1921, October 1921 to April 1926, November 1926 to May 1927, October 1927 to September 1982. Prior to October 1930, published as "near Monroe."

GAGE.--Water-stage recorder and concrete control. Datum of gage is 270.57 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi downstream at different datums.

REMARKS.--Flow regulated since 1941 by Fern Ridge Lake. Several small diversions above station.

AVERAGE DISCHARGE.--59 years (water years 1922-25, 1928-82), 772 ft3/s, 559,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 19,300 ft<sup>3</sup>/s Jan. 2, 1943, gage height, 17.14 ft, site and datum then in use, from graph based on gage readings, includes some overflow from Willamette River near Junction City; no flow Oct. 20-22, 1944 (water filling pool at gage); minimum observed prior to regulation, 7 ft<sup>3</sup>/s Sept. 29, Oct. 1, 1939.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF FERN RIDGE DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1922-40 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1923-40

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN I INTERVAL, EXCEEDANCE	IN YEARS	, AND AN	INUAL N	⊃ <b>N</b> -
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	16	150	41	31	.77	.5	1	13	9.6	8.3	7.4		
NOVEMBER	20	4265	666	1094	1.64	7.9	3	14	10	8.8	7.8		
DECEMBER	76	2720	1240	804	.65	14.7	7	15	11	9.6	8.5		
JANUARY	485	4656	1921	1266	•66	22.8	14	16	12	10	9.2		
FEBRUARY	535	4401	2087	1264	.61	24.8	30	17	13	12	10		
MARCH	359	3243	1204	731	.61	14.3	60	19	15	13	12		
APRIL	165	2326	797	622	.78	9.5	90	21	16	15	13		
MAY	90	535	240	116	.48	2.9	120	25	19	17	16		
JUNE	56	444	123	94	.76	1.5	183	48	36	32	29		
JULY	23	127	51	24	.48	.6							
AUGUST	12	45	24	8.7	.36	.3							
SEPTEMBER	12	40	21	7.1	. 34	.2							
ANNUAL	308	1228	703	260	.37	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1922-40 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1922-40

DISCHARGE, YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, ÍN '	OR INDICA YEARS, ANI ABILITY.	D ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE	2	5	10	25	50	100
							DAYS)	50%	20%	10%	4%	2%	1%
5680	8480	12800	16000	20200									
							1	7500	11000	13600	17100		
WE I GHTED	SKEW =	.094					3	6680	9570	11700	14500		
							7	5450	7260	8420	9850		
							15	4240	5590	6420	7390		
							30	3070	4020	4560	5150		
							60	2300	3020	3440	3910		
							90	1940	2570	2930	3350		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1922-40

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3360	2130	1470	1060	776	567	300	156	82	45	34	27	23	19	15

### 14170000 LONG TOM RIVER AT MONROE, OR--Continued

### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF FERN RIDGE DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1942-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1943-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	N CFS, FO L, IN YEA NCE PROBA	RS, AND		ION-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	27	1895	746	381	.51	7.7	1				<del></del>		
NOVEMBER	92	3437	927	672	.72	9.5	3						
DECEMBER	56	5355	1891	1258	.67	19.4	7	32	22	17	13	9.9	7.9
JANUARY	44	6222	2334	1427	.61	24.0	14	34	25	20	16	13	11
FEBRUARY	44	4032	1691	1023	.60	17.4	30	37	27	22	19	15	13
MARCH	136	2761	954	700	.73	9.8	60	40	29	<b>2</b> 5	22	19	17
APRIL	55	2277	493	496	1.01	5.1	90	45	33	29	27	24	23
MAY	50	1193	234	229	.98	2.4	120	54	40	35	32	29	28
JUNE	35	258	83	45	.54	.8	183	152	98	76	61	47	39
JULY	23	119	43	16	.36	.4							
AUGUST	20	524	87	101	1.16	.9	NOTE:	SHORT-DU	RATION S	STATISTICS	S UNCERT	TAIN DUE	то
SEPTEMBER	12	960	245	279	1.14	2.5		EXCESSIV					
ANNUAL	177	1517	808	282	.35	100							
DISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD  CURRENCE	OUS PEAK I	 , IN		BASE	D ON PER  ARGE, IN	BABILITY ( RIOD OF RI	ECORD 1  R INDICA	1942-82  TED RECU	
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	 , IN	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN	RIOD OF RI	ECORD 1  R INDICA EARS, AN	1942-82 TED RECU	RRENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL,	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER ARGE, IN	RIOD OF RI	ECORD 1  R INDICA EARS, AN	1942-82 TED RECU	RRENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER	I CFS, FOR VAL, IN YE ICE PROBAE	ECORD 1  R INDICA EARS, AN BILITY,  25 4%	NTED RECU ID ANNUAL IN PERCE	RRENCE NT 100 1%
DISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH.	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FOR INCE PROBABLE 10%	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9710	ATED RECU ID ANNUAL IN PERCE 50 2%	100 1%
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	D1SCH.  2 50% 5790 5240	D ON PER ARGE, IN INTERV EXCEEDAN 20% 7660 6890	I CFS, FOR PAL, IN YE ICE PROBAE 10 10 10 8660 7760	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9710 8670	TED RECU ID ANNUAL IN PERCE 50 2%	10900 9720
DISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	D1SCH 2 50% 5790 5240 4670	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 7660 6890 6100	I CFS, FOR ICE PROBABLE 10 10 10 10 10 10 10 10 10 10 10 10 10	ECORD 1  R INDICA EARS, AN BILITY, 25 45  9710 8670 7610	1942-82 ATED RECU IN PERCE 50 2% 10400 9230 8080	100 1% 10900 9720 8480
DISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50% 5790 5240 4670 4010	D ON PEF ARGE, IN INTERV EXCEEDAN 5 20\$ 7660 6890 6100 5390	RIOD OF RI I CFS, FOR IAL, IN YEA ICE PROBAB 10% 10% 8660 7760 6840 6150	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9710 8670 7610 6970	10400 9230 8080 7500	10900 9720 8480 7960
DISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30	D1 SCH	7660 6890 6100 5390 4420	10 CFS, FOR AL, IN YELDE PROBABLE 10 10%	9710 8670 7610 970 970 970 970	1942-82 ITED RECU ID ANNUAL IN PERCE 50 2% 10400 9230 8080 7500 6650	RRENCE NT 100 13 10900 9720 8480 7960 7220
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50% 5790 5240 4670 4010	D ON PEF ARGE, IN INTERV EXCEEDAN 5 20\$ 7660 6890 6100 5390	RIOD OF RI I CFS, FOR IAL, IN YEA ICE PROBAB 10% 10% 8660 7760 6840 6150	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9710 8670 7610 6970	10400 9230 8080 7500	10900 9720 8480 7960
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	CATED RE-	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 18	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	5790 5240 4670 4010 3210 2470 2120	7660 6890 6190 4420 3460 2960	8660 7760 6840 6150 5170 4040 3410	R INDICA EARS, AN BILITY, 25 4% 9710 8670 7610 6970 6040 4690	1942-82  ITED RECU ID ANNUAL IN PERCE  50 2%  10400 9230 8080 7500 6650 5130	RRENCE NT 100 1% 10900 9720 8480 7960 7220 5530
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	DURATIO	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	5790 5240 4670 4010 3210 2470 2120	7660 6890 4420 3460 2960	8660 7760 6840 6150 5170 4040 3410	PR INDICA FARS, AN BILITY, 25 4% 9710 8670 7610 6970 6040 4690 3890	1942-82  ITED RECU ID ANNUAL IN PERCE  50 2%  10400 9230 8080 7500 6650 5130	RRENCE NT 100 1% 10900 9720 8480 7960 7960 7220 5530
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUAL 2 50%	FOR INDIG	DURATIO	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEN 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	5790 5240 4670 4010 3210 2470 2120	7660 6890 4420 3460 2960	8660 7760 6840 6150 5170 4040 3410	PR INDICA FARS, AN BILITY, 25 4% 9710 8670 7610 6970 6040 4690 3890	1942-82  ITED RECU ID ANNUAL IN PERCE  50 2%  10400 9230 8080 7500 6650 5130	RRENCE NT 100 1% 10900 9720 8480 7960 7220 5530

#### 14170500 ROCK CREEK NEAR PHILOMATH. OR

LOCATION.--Lat 44°30'05", long 123°26'20, in SW\nE\neq sec.29, T.12 S., R.6 W., Benton County, Hydrologic Unit 17090003, on left bank 600 ft upstream from bridge on State Highway 34, 4.5 mi southwest of Philomath, and at mile 0.4.

DRAINAGE AREA .-- 14.6 mi2.

PERIOD OF RECORD.--October 1945 to September 1952, water years 1953-60 (annual maximum), October 1974 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 349.08 ft National Geodetic Vertical Datum of 1929. Prior to October 1974, at site 0.2 mi downstream at datum 5.08 ft higher.

REMARKS.--Flow regulated by small storage reservoir operated by city of Corvallis, most low-water flow diverted to city of Corvallis water supply system.

AVERAGE DISCHARGE.--12 years, 51.2 ft<sup>3</sup>/s, 47.62 in/yr, 37,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,190 ft<sup>3</sup>/s Dec. 21, 1955, gage height, 6.82 ft, at site and datum then in use, from rating curve extended above 810 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 13.17 ft Dec. 15, 1977; minimum discharge, 0.2 ft<sup>3</sup>/s Aug 24, 1946, for several days in summers of 1949 and 1950, Sept. 1-3, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 24, 1964, reached a stage of 7.30 ft, discharge, 2,500 ft<sup>3</sup>/s, at site 0.2 mi

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1946-79 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-79

	WINIMOW	WAYIMIIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND A	NNUAL N	ON-
НТИОМ	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	.9	80	17	24	1.40	2.8	1	.7	.3	.2	.1		
NOVEMBER	3.7	148	62	44	.71	10.1	3	•7	.3	.2	.2		
DECEMBER	4.1	187	107	57	.53	17.3	7	•8	.4	.3	•2		
JANUARY	3.1	215	114	66	.58	18.4	14	.8	.4	.3	.2		
FEBRUARY	15	256	137	61	.44	22.1	30	1.0	.5	.4	.3		
MARCH	28	154	89	31	• 34	14.4	60	1.4	.8	.6	•5		
APRIL	18	85	46	18	.39	7.4	90	2.0	1.3	1.1	.9		
MAY	12	57	27	14	•52	4.4	120	3.1	2.3	1.9	1.6		
JUNE	6.7	18	10	3.5	.34	1.7	183	7.7	5.3	4.2	3.3		
JULY	2.5	6.5	4.1	1.3	.33	•7							
AUGUST	.6	5.9	2.1	1.6	.77	.3							
SEPTEMBER	.5	6.3	2.3	1.9	.83	.4							
ANNUAL	14	72	51	16	.30	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1946-79 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-79

SCHARGE, YEARS, A							PERIOD (CON-		INTERV	CFS, FOR AL, IN YE DE PROBAE	ARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20% 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
702	987	1430	1750										
							1	609	772	860			
WEIGHTED	SKEW =	.273					3	460	587	659			
							7	326	420	480			
							15	248	309	343			
							30	192	227	241			
							60	153	183	193			
							90	142	174	184			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-79

		DISCH	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	IE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
206	139	105	83	67	54	33	18	9.4	4.9	3.6	2.9	2.2	1.4	.7

#### 14171000 MARYS RIVER NEAR PHILOMATH, OR

LOCATION.--Lat 44°31'35", long 123°20'00", in NE\SE\ sec.18, T.12 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank 50 ft downstream from bridge on Bellfountain Road, 0.6 mi downstream from Newton Creek, 2.0 mi southeast of Philomath, and at mile

DRAINAGE AREA.--159  $\min^2$ , including drainage area of Evergreen Creek above Bellfountain Road, 1.4  $\min$  south of station.

PERIOD OF RECORD. -- October 1940 to September 1982.

1910

1290

916

695

547

432

266

157

42

31

GAGE.--Water-stage recorder. Datum of gage is 224.01 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Prior to Oct. 1, 1961, nonrecording gage at bridge 50 ft upstream at same datum.

REMARKS.--Records include flow of Evergreen Creek at Bellfountain Road crossing. Slight regulation by small storage reservoir on Rock Creek from which municipal supply is diverted for city of Corvallis. Other small diversions above station for irrigation.

AVERAGE DISCHARGE.--42 years, 458 ft<sup>3</sup>/s, 39.12 in/yr, 331,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.72 ft; maximum gage height, 20.91 ft Jan. 15, 1974; minimum discharge, 0.60 ft<sup>3</sup>/s Aug. 23, 1967.

#### STATISTICAL SUMMARIES

М	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1941-82		MAI		AND PROBA O ON PERI				.011
	MINIMIM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL,	IN YEAR	RS, AND	ATED RECU ANNUAL N IN PERCE	10N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JUNE JUNE JUGUST SEPTEMBER	8.2 22 30 38 83 190 160 91 43 16 4.9 6.0	568 1897 2360 2455 2398 1736 1133 660 185 59 36	73 455 1059 1239 1066 793 462 219 88 34 17	102 398 622 690 486 381 242 122 31 11 7.2	1.39 .87 .59 .56 .46 .48 .52 .56 .35 .32 .42	1.3 8.2 19.2 22.4 19.3 14.4 4.0 1.6 .6	1 3 7 14 30 60 90 120 183	9.5 9.8 10 11 12 15 18 24 54	5.7 6.1 6.7 7.3 8.5 10 13 18 38	4.1 4.6 5.2 5.8 6.9 8.7 11 15 32	4.7 5.8	5 2.5 1 3.1 7 3.6 3 4.7 1 6.2	2.0 2.5 3.0 4.7 5.5
ANNUAL 	104 TUDE AND				.31 OUS PEAK F	100 	 MA (					AL HIGH F	LOW
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK F 1-82 INTERVAL, IN PERCEI	-LOW , IN	PERIOD (CON-	BASEC DISCHA	ON PERI	OD OF RECEIVED	ECORD 1 R INDICA EARS, AN		RRENCE
MAGNI	TUDE AND BASE	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE	ISTANTANE CORD 194	OUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD	BASEC DISCHA	ON PERI	OD OF RECEIVED	ECORD 1 R INDICA EARS, AN	1941-82 TED RECUND ANNUAL	RRENCE
MAGNI  DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK I 1-82 INTERVAL, IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA E	O ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF RECEIVED	ECORD 1 R INDICA EARS, AN BILITY,	1941-82 ATED RECU ND ANNUAL IN PERCE	IRRENCE NT
MAGNI  DISCHARGE YEARS, 1.25 80%	104  TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	STANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK F 1-82 INTERVAL IN PERCEI 50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  5230 4400 3270 22560 1810 1420 1260	RGE, IN INTERVAL  XXCEEDANC  5 20%  7300 6060 4410 3130 2320 1840 1640	OD OF RECEIVED OF	9790 8060 5730 3990 2240	1941-82 NTED RECUID ANNUAL IN PERCE 50 2% 10600 8750 6170 4260 2350	IRRENCE 100 1% 11400 9360 6570 4440 2950 22440
MAGNI  DISCHARGE YEARS, 1.25 80%	104  TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20% 8920 1	TY OF IN OD OF RECATED RECATED RECATED RECATED RECATED ROSE	ISTANTANE CORD 194 CURRENCE ABILITY, 25 4% 2900 1.	OUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW  IN NT  IOO  If  POO  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  2 50%  5230 4400 3270 2360 1810 1420 1420 0F RECOR	7300 6060 4410 3130 2320 1840	OD OF RE	9790 8060 5730 3990 2750 2240 1970	1941-82 NTED RECUID ANNUAL IN PERCE 50 2% 10600 8750 6170 4260 2350	1140 936 657 449 295

#### 14172000 CALAPOOIA RIVER AT HOLLEY, OR

LOCATION.--Lat 44°21'05", long 122°47'10", in SEt sec.15, T.14 S., R.1 W., Linn County, Hydrologic Unit 17090003, on right bank 200 ft downstream from bridge on State Highway 228, 0.3 mi southwest of Holley, 5.0 mi upstream from Brush Creek, and at mile 45.4.

DRAINAGE AREA .-- 105 mi 2.

1540

1070

825

676

564

480

350

241

147

PERIOD OF RECORD. -- September 1935 to September 1982. Prior to October 1963, published as "Calapooya River at Holley".

GAGE.--Water-stage recorder. Datum of gage Is 527.58 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1963, nonrecording gage at present site and datum.

REMARKS.--Slight regulation at times during low-water periods by small dam upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--47 years, 440 ft<sup>3</sup>/s, 56.91 in/yr, 318,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.60 ft; maximum gage height, 15.30 ft Dec. 22, 1964 (backwater from debris); minimum discharge observed, 13 ft<sup>3</sup>/s Sept. 8, 1940.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		IARGE, IN INTERVAL EXCEEDAN	, IN YEA	RS, AND	ANNUAL I	NON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE Days)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	22	697	144	153	1.06	2.7	1 •	25	21	18	17	15	14
NOVEMBER	19	1417	544	368	.68	10.3	3	25	21	19	18	17	16
DECEMBER	60	2408	905	538	. 59	17.1	7	26	22	20	19	- 17	17
JANUARY	78	1934	895	481	.54	16.9	14	27	23	21	19	18	17
FEBRUARY	102	1895	831	350	.42	15.7	30	30	25	22	21	19	18
MARCH	190	1363	711	295	.41	13.4	60	36	28	25	23	20	19
APRIL	194	1276	565	213	. 38	10.7	90	42	32	28	25	23	21
MAY	121	727	361	156	.43	6.8	120	53	39	33	30	26	23
JUNE	66	534	184	93	.50	3.5	183	110	80	67	58	49	44
JULY	35	153	73	27	.37	1.4							
AUGUST	21	106	42	14	.34	-8							
SEPTEMBER		133	47	27	.57	.9							
ANNUAL	189	671	440	107	.24	100							
	BASE	PROBABILI D ON PERI	OD OF RE	CORD 193		FLOW	MAG	BASE	AND PROBA	IOD OF R	ECORD 1	936-82	
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	PROBABIL! D ON PERI	OD OF RE	CORD 193	6-82 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER	CFS, FO	ECORD 1  R INDICA EARS, AN	936-82 TED RECUID ANNUAL	JRRENCE
OI SCHARGE	BASE , IN CFS,	PROBABIL! D ON PERI	OD OF RE	CORD 193	6-82 INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN  INTERV  EXCEEDANCE  5	CFS, FO AL, IN Y CE PROBA	ECORD 1 R INDICA EARS, AN BILITY,	936-82 TED RECUID ANNUAL IN PERCE	URRENCE ENT
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	PROBABIL! D ON PER! FOR IND! L EXCEEDA	CATED RENCE PROB	CURRENCE BABILITY,	INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN  INTERV  EXCEEDANCE	CFS, FO AL, IN Y	ECORD 1 R INDICA EARS, AN BILITY,	936-82 TED RECUID ANNUAL IN PERCE	JRRENCE
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDI- LL EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE MABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDANC  5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 1  R INDICA EARS, AN BILITY,  25 4%	936-82  TED RECUID ANNUAL IN PERCE	URRENCE ENT 100
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE MABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDANG  5 20%  6520	CFS, FO AL, IN Y CE PROBA 10 10%	R INDICA EARS, AN BILITY, 25 4%	936-82  TED RECUID ANNUAL IN PERCE  50 2%	JRRENCE ENT 100 1%
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE MABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDANG  5 20%  6520 5010	CFS, F0 AL, IN Y CE PROBA  10 10% 7850 5930	R INDICA EARS, AN BILITY, 25 4% 9530 7040	936-82 STED RECUID ANNUAL IN PERCE 50 2% 10800 7820	JRRENCE ENT 100 1%
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE MABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH  2 50%  4500 3550 2580	D ON PER  ARGE, IN INTERV EXCEEDANG  5 20%  6520 5010 3490	CFS, FO AL, IN Y CE PROBA 10 10% 7850 5930 4030	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9530 7040 4640	936-82 ITED RECLID ANNUAL IN PERCE 50 2% 10800 7820 5050	12000 8580 5430
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE MABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  4500 3550 2580 1860	D ON PER  ARGE, IN INTERV EXCEEDANC  5 20%  6520 5010 3490 2410	CFS, FO AL, IN Y CE PROBA 10 10% 7850 5930 4030 2720	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9530 7040 4640 3060	936-82 ITED RECLID ANNUAL IN PERCE 50 2% 10800 7820 5050 3280	12000 8580 5430 3470
01 SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE MABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH	D ON PER  ARGE, IN INTERV, EXCEEDANC  5 20%  6520 5010 3490 2410 1830	CFS, FO AL, IN Y CE PROBA 10 10 7850 5930 4030 2720 2020	ECORD 1  R INDICA EARS, AN BILITY,  25 43  9530 7040 4640 43060 2210	936-82 TED RECLID ANNUAL IN PERCE 50 2% 10800 7820 5050 3280 2320	12000 8580 5430 3470 2420
01 SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE MABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  4500 3550 2580 1860 1450 1140	D ON PER	CFS, FO AL, IN Y CE PROBA 10 10 10 5930 4030 2720 2020 1610	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9530 7040 4640 3060 2210 1780	936-82 ITED RECL IN PERCE 50 2% 10800 7820 5050 3280 2320 1900	12000 8580 5430 3470 2420 2000
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROP	CURRENCE ABILITY, 25 4 4 2 2100 1	1NTERVAL IN PERCEI 50 2% 3700 15	FLOW  , IN NT 100 1% 200	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH  2 50%  4500 3550 2580 1860 1450 1140 1010	ARGE, IN INTERV, EXCEEDANC 5 20% 5010 3490 2410 1830 1440 1260	CFS, FO AL, IN Y CE PROBA  10 10%  7850 5930 4030 2720 2020 1610 1400	ECORD 1  R INDICA EARS, AN BILITY,  25 43  9530 7040 4640 43060 2210	936-82 TED RECLID ANNUAL IN PERCE 50 2% 10800 7820 5050 3280 2320	12000 8580 5430 3470 2420
01 SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROP	CURRENCE ABILITY, 25 4 4 2 2100 1	1NTERVAL IN PERCEI 50 2% 3700 15	FLOW  , IN NT 100 1% 200	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  4500 3550 2580 1860 1450 1140 1010	ARGE, IN INTERV, EXCEEDANC 5 20% 5010 3490 2410 1830 1440 1260	CFS, FO AL, IN Y CE PROBA  10 10%  7850 5930 4030 2720 2020 1610 1400	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9530 7040 4640 3060 2210 1780	936-82 ITED RECL IN PERCE 50 2% 10800 7820 5050 3280 2320 1900	12000 8580 5430 3470 2420 2000
01 SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20% 8200	CATED RENCE PROB	CURRENCE ABILITY,  25 43 2100 1	INTERVAL IN PERCEI 50 2% 3700 15	FLOW  IN  100  13  200  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH  2 50%  4500 3550 2580 1860 1450 1140 1010  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDANG  5 20\$  6520 5010 3490 2410 1830 1440 1260  RD 1936-8	CFS, F0 AL, IN Y CE PROBA  10 10%  7850 4030 2720 2020 1610 1400	PECORD 1  R INDICA EARS, AN BILITY,  25 43  9530 7040 4640 3060 2210 1780 1560	936-82 ITED RECL IN PERCE 50 2% 10800 7820 5050 3280 2320 1900	12000 8580 5430 2420 2000

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#### 14173500 CALAPOOIA RIVER AT ALBANY, OR

LOCATION.--Lat 44°37'15", long 123°07'40", in NW± sec.13, T.11 S., R.4 W., Linn County, Hydrologic Unit 17090003, near right bank on downstream side of bridge on Riverside Drive at Albany, O.6 mi downstream from Oak Creek, and at mile 3.0.

DRAINAGE AREA. -- 372 mi2.

PERIOD OF RECORD.--October 1940 to September 1981. Prior to October 1963, published as "Calapooya River at Albany".

GAGE.--Water-stage recorder. Datum of gage is 180.85 ft National Geodetic Vertical Datum of 1929. Prior to May 11, 1962, nonrecording gage at same site and datum.

REMARKS.—Higher flows are affected by backwater from Willamette River at times. Diurnal fluctuation caused by ponds at flour mills near Shedd. Diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years, 895 ft<sup>3</sup>/s, 32.67 in/yr, 648,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 32,700 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 22.12 ft; maximum gage height, 25.5 ft Jan. 2, 1943, from graph based on gage readings (backwater from Willamette River); minimum discharge, 3.5 ft<sup>3</sup>/s Sept. 7, 1967.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-81 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-81

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN ( INTERVAL, EXCEEDANC	IN YEARS	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	20	1293	201	282	1.40	1.9	1	13	8.6	6.6	5.2	3.9	3.1
NOVEMBER	34	3408	1042	830	.80	9.7	3	19	14	11	9.1-	7.2	6.0
DECEMBER	69	5688	2123	1337	.63	19.7	7	23	17	14	12	10	9.1
JANUARY	102	4214	2276	1233	.54	21.1	14	24	18	16	14	12	10
FEBRUARY	108	4872	1845	917	.50	17.1	30	28	21	18	15	13	11
MARCH	358	3020	1447	730	.50	13.4	60	35	26	22	19	17	15
APRIL	280	2137	914	438	. 48	8.5	90	42	30	26	23	20	19
MAY	174	1598	537	299	• 56	5.0	120	56	41	34	30	26	24
JUNE	84	586	228	107	.47	2.1	183	133	94	78	66	55	49
JULY	38	227	84	38	. 45	.8							
AUGUST	16	103	40	17	.42	.4							
SEPTEMBER	18	157	49	33	.68	.5							
ANNUAL	244	1512	896	263	. 29	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-81 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-81

	, IN CFS						PERIOD (CON-	DISC	INTER	VAL, ÍN '	OR INDICA YEARS, AI ABILITY.	ND ANNUA	Ĺ
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
7370	12300	19800	25000	31700	36700	41800							
							1	11300	17200	20900	25200	28100	30900
WEIGHTE	D SKEW =	278					3	9350	13400	15700	18100	19600	20900
							7	6770	9340	10700	12200	13100	13800
							15	4710	6240	7010	7760	8200	8570
							30	3570	4510	4910	5250	5420	5550
							60	2740	3550	3940	4300	4510	4670
							90	2370	3050	3380	3690	3870	4010

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-81

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3800	2380	1700	1270	1000	808	552	347	195	101	74	55	41	32	24

#### 14174000 WILLAMETTE RIVER AT ALBANY, OR

LOCATION.--Lat 44°38'20", long 123°06'20", in SW¼ sec.6, T.11 S., R.3 W., Linn County, Hydrologic Unit 17090003, on right bank 5 ft upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi downstream from Calapooia River, and at mile 119.31.

DRAINAGE AREA.--4,840 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi upstream at datum 5.00 ft higher. Sept. 27, 1906, to Nov. 12, 1934, nonrecording gage at site 300 ft upstream at datum 5.00 ft higher. Nov. 14, 1934, to Sept. 30, 1962, at datum 5.00 ft higher.

REMARKS.--Flow regulated by nine reservoirs above station. Albany power canal diverts water from South Santiam River at Lebanon and discharges into Calapooia River near mouth; small diversions for irrigation and municipal water supply.

AVERAGE DISCHARGE.--88 years (water years 1894, 1896-82),  $14,470 \text{ ft}^3/\text{s}$ , 40.60 in/yr, 10,480,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft<sup>3</sup>/s Jan. 14, 1881, gage height, 37.8 ft, present datum; minimum, 1,840 ft<sup>3</sup>/s Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft, discharge, 340,000 ft<sup>3</sup>/s, from rating curve extended above 220,000 ft<sup>3</sup>/s. Flood of Feb. 4, 1890, reached a stage of 38.9 ft, discharge, 291,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF NINE RESERVOIRS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1894-41 MA

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1896-41

	MINIMA	MANTHUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	DISCH	INTERVAL	., IN YEA	OR INDICA NRS, AND NBILITY,	ANNUAL N	ION-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	2313	16410	4419	2671	.60	2.7	1	2590	2260	2110	1990	1870	1790
NOVEMBER	2242	42920	13500	9776	.72	8.2	3	2610	2270	2120	2000	1880	1810
DECEMBER	4999	40990	20790	9531	.46	12.6	7	2630	2290	2140	2020	1900	1820
JANUARY	6613	54370	27190	12430	.46	16.5	14	2670	2330	2180	2080	1970	1910
FEBRUARY	8541	50050	25020	11330	.45	15.2	30	2780	2430	2270	2160	2040	1970
MARCH	6855	51030	21700	9764	.45	13.1	60	2940	2540	2370	2260	2140	2070
APRIL	7067	38020	18000	7122	.40	10.9	90	3170	2690	2480	2330	2180	2090
MAY	5971	28950	13110	4713	.36	7.9	120	3450	2860	2620	2450	2290	2190
JUNE	3316	22680	9581	4349	.45	5.8	183	5070	3950	3490	3160	2830	2640
JULY	2497	10780	5205	2019	.39	3.2							
AUGUST	2034	5771	3312	776	.23	2.0							
SEPTEMBER	2153	6604	3308	898	.27	2.0							
ANNUAL	7983	18870	13530	3128	.23	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1896-41

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1896-41

YEARS,	AND ANN	S, FOR II	EDANCE P	ROBABILI	TY, IN P		PERIOD (CON-	DISC	INTER	N CFS, F WAL, IN NCE PROB	YEARS, A	ND ANNUA	L
1.25 80% 	2 50% 	5 20% 	10 10%	25 4% 	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
70800	104000	153000	187000	234000	270000	307000							
							1	98300	143000	174000	215000	246000	278000
EIGHTE	D SKEW	= .059					3	87100	123000	146000	175000	197000	217000
							7	68700	92000	106000	122000	133000	143000
							15	51400	66200	74500	83800	89900	95500
							30	39400	49000	54000	59400	62800	65700
							60	31400	38600	42600	46800	49500	52000
							90	27500	33600	36800	40300	42500	44400

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1896-41

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
40200	28800	23500	19800	17300	15200	12000	9250	6630	4490	3870	3510	3190	2890	2540

### 14174000 WILLAMETTE RIVER AT ALBANY, OR--Continued

#### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF NINE RESERVOIRS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1969-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-82

		MANIMINA	MCAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-	DISC	INTERVA	L, IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL N	ON-
МОМТН	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	7454	11430	9144	1191	.13	5.1	1	4580	3800	3340	2940		
NOVEMBER	7131	39540	16600	9035	.54	9.2	3	4680	3880	3390	2980		
DECEMBER	4150	55390	32600	14980	.46	18.1	7	4770	3940	3460	3050		
JANUARY	3901	45070	31320	13550	. 43	17.4	14	4860	4030	3560	3160		
FEBRUARY	3208	34190	20810	9616	.46	11.6	30	4950	4170	3730	3350		
1ARCH	6807	43270	18100	10470	.58	10.1	60	5160	4380	3990	3690		
APRIL	5630	23520	13960	5671	.41	7.8	90	5520	4640	4210	3870		
MAY	4733	14810	10610	3174	.30	5.9	120	6030	5130	4700	4380		
JUNE	4281	13360	8168	2878	.35	4.5	183	7100	6050	5550	5170		
JULY	4084	7333	5385	963	.18	3.0							
AUGUST	4778	7313	5672	747	.13	3.2							
SEPTEMBER	5245	8985	7272	1107	.15	4.0							
ANNUAL	5831	22550	14960	4656	.31	100							
DISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	OUS PEAK F			BASI	ARGE, I	RIOD OF N CFS, F	OF ANNUA RECORD 1 OR INDICA	969-82  TED RECU	
OISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	INTERVAL IN PERCEI		PERIOD (CON- SECU-	BASI	HARGE, I	RIOD OF N CFS, F	RECORD 1	969-82 TED RECUID ANNUAL	 RRENCE
ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD CURRENCE	INTERVAL IN PERCEI	, IN VT	PERIOD (CON-	BASI	HARGE, I	RIOD OF N CFS, F	RECORD 1  OR INDICA YEARS, AN	969-82 TED RECUID ANNUAL	RRENCE NT
OISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE IABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISC	HARGE, I INTER EXCEEDA	N CFS, F VAL, IN NCE PROB	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%	969-82  TED RECUI D ANNUAL IN PERCEI	RRENCE NT
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE IABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50%	HARGE, II INTER EXCEEDA  5 20%	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4%	969-82  TED RECUID ANNUAL IN PERCEI	RRENCE
OISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE IABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDA 5 20% 94800 88100	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400	969-82 ITED RECUI ID ANNUAL IN PERCEI 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE IABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCI 2 50%  74800 70900 63700	HARGE, II INTER' EXCEEDA 5 20% 94800 88100 75700	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1	969-82  TED RECUID ANNUAL IN PERCEI	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE IABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 74800 70900 63700 54100	HARGE, I INTER EXCEEDA 5 20% 94800 88100 75700 64900	N CFS, F VAL, IN NCE PROB 10 10% 101000 92800 78200 67200	RECORD 1	969-82 ITED RECUID ANNUAL IN PERCEI	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE IABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCI 2 50% 74800 70900 63700 54100 45100	HARGE, I: INTER: EXCEEDA  5 20%  94800 88100 75700 53900	N CFS, F VAL, IN NCE PROB 10 10 10 92800 78200 57200 55700	OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400 79200 68100 56500	969-82  TED RECUID ANNUAL IN PERCEI  50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE IABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 74800 70900 63700 54100	HARGE, I INTER EXCEEDA 5 20% 94800 88100 75700 64900	N CFS, F VAL, IN NCE PROB 10 10% 101000 92800 78200 67200	RECORD 1	969-82 ITED RECUID ANNUAL IN PERCEI	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4\$   N TABLE	INTERVAL IN PERCEI 50 2%	, IN  100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	DISCI 2 50% 74800 70900 63700 54100 45100 36300 0F RECC	HARGE, I: INTER: EXCEDA: 5 20\$ 94800 88100 75700 64900 53900 46500 41100 DRD 1969	N CFS, F VAL, IN NCE PROB 10 10% 10% 78200 67200 55700 49800 44600 -82	OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400 79200 68100 56500 51900 47100	969-82  TED RECUID ANNUAL IN PERCEI  50 2%	100 1%
1.25 80% WEIGHTED	BASE , IN CFS, AND ANNUA 2 50% ) SKEW =	FOR INDI L EXCEEDA 5 20%	CATED RENCE PROB	CCURRENCE LABILITY, 25 4% N TABLE CFS, WHI	INTERVAL IN PERCEI 50 2% OF DAILY I	JALED OR E	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	74800 70900 63700 54100 36300 31400 OF RECC	HARGE, I: INTER: EXCEDA: 5 20\$ 94800 88100 75700 64900 53900 46500 41100 DRD 1969	N CFS, F VAL, IN NCE PROB 10 10% 10% 78200 67200 55700 49800 44600 -82	OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400 79200 68100 56500 51900 47100	969-82  TED RECUID ANNUAL IN PERCEI  50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4\$   N TABLE	INTERVAL IN PERCEI 50 2% OF DAILY I	, IN  100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCI 2 50% 74800 70900 63700 54100 45100 36300 0F RECC	HARGE, I: INTER: EXCEDA: 5 20\$ 94800 88100 75700 64900 53900 46500 41100 DRD 1969	N CFS, F VAL, IN NCE PROB 10 10% 10% 78200 67200 55700 49800 44600 -82	OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400 79200 68100 56500 51900 47100	969-82  TED RECUID ANNUAL IN PERCEI  50 2%	100 18

#### 14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°42'25", long 122°06'00", in SE¼NW¼ sec.17, T.10 S., R.6 E., Marion County, Hydrologic Unit 17090005, on right bank 0.5 mi downstream from Boulder Creek, 3.0 mi southeast of Detroit, and at mile 70.7.

DRAINAGE AREA. -- 216 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1907 to October 1909, October 1928 to September 1982. Monthly discharge only January 1907, published in WSP 1318. Prior to October 1952, published as "at Detroit."

GAGE.--Water-stage recorder. Datum of gage is 1,590.07 ft National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE. -- 56 years, 1,005 ft3/s, 63.18 in/yr, 728,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—-Maximum discharge, 26,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.76 ft, temporary backwater from debris, from rating curve extended above 6,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 250 ft<sup>3</sup>/s Sept. 13, 1909.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1908-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		BASED ON PERIOD OF RECORD 1909-82

	MININUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOI , IN YEAL CE PROBA	RS, AND	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	312	1215	515	184	.36	4.3	1	381	338	319	304	288	279
NOVEMBER	336	2167	956	465	.49	7.9	3	383	339	320	304	289	279
DECEMBER	432	3840	1408	734	.52	11.6	7	386	342	322	306	290	280
JANUARY	383	2991	1306	602	.46	10.8	14	393	348	327	310	294	283
FEBRUARY	404	2816	1257	542	.43	10.4	30	405	357	335	319	301	290
MARCH	616	2865	1143	396	. 35	9.5	60	422	371	348	330	311	300
APRIL	610	2137	1338	350	.26	11.1	90	442	385	359	339	319	306
MAY	701	2762	1468	474	.32	12.1	120	470	405	377	356	336	323
JUNE	441	2759	1139	503	.44	9.4	183	599	491	446	414	383	364
JULY	375	1101	640	178	.28	5.3							
AUGUST	326	663	477	84	.18	3.9							
SEPTEMBER	309	595	441	68	. 15	3.6							
ANNUAL	569	1506	1006	203	.20	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1908-82

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1908-82

OISCHARGE, YEARS, AI							PERIOD (CON-		INTER	VAL, IN	OR INDIC/ YEARS, AI ABILITY.	ND ANNUA	_
1.25 80% 	2 50% 	5 20% 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
4970	7580	11700	14600	18700	22000	25400							
							• 1	6100	9060	11000	13500	15300	17000
WEIGHTED	SKEW =	.062					3	4860	7130	8680	10700	12200	13700
							7	3710	5110	5990	7040	7780	8500
							15	2820	3630	4100	4630	4980	5300
							30	2260	2800	3090	3400	3600	3780
							60	1870	2250	2460	2670	2810	2930
							90	1680	1990	2140	2300	2400	2480

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1908-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	======		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2320	1820	1580	1390	1240	1120	939	784	654	547	509	473	440	406	369

## WILLAMETTE RIVER BASIN 14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°45'10", long 122°07'40", in SE±NE± sec.36, T.9 S., R.5 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 600 ft upstream from Canyon Creek, 1.5 mi northeast of Detroit, and at mile 2.0.

DRAINAGE AREA .-- 106 mi2.

ANNUAL

276

PERIOD OF RECORD. -- June 1932 to September 1982. Monthly discharge only June 1932, published in WSP 1318. Prior to October 1952, published as "above French Creek, near Detroit."

GAGE.--Water-stage recorder. Datum of gage is 1,573.95 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, at site 0.2 mi downstream at datum 13.46 ft lower.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE. -- 50 years, 577 ft3/s, 73.92 in/yr, 418,000 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1933-82

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft3/s Dec. 22, 1964, gage height, 14.55 ft; minimum, 87 ft3/s Sept. 2, 1940.

STATISTICAL SUMMARIES

DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-COEFFI-PERIOD DARD PERCENT CIENT OF EXCEEDANCE PROBABILITY, IN PERCENT DEVIA-OF (CON-MINIMUM MAXIMUM ANNUAL MEAN TION VARI-SECU-MONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE DAYS) 50% 20% 10% 5% 2% 1% OCTOBER 119 104 827 261 164 .63 3.8 104 97 92 87 84 NOVEMBER 106 1504 648 374 .58 9.3 3 120 105 QR 93 87 84 DECEMBER 2385 7 163 942 519 .55 13.6 122 106 99 94 RR 25 JANUARY 848 142 2135 460 -54 12.2 14 126 109 102 96 90 87 FEBRUARY 393 .50 91 176 788 1867 11.4 30 132 114 106 100 94 MARCH 289 1874 263 . 39 60 122 113 106 99 666 9.6 143 APRIL 295 1280 .32 790 11.4 90 159 132 120 111 103 98 MAY 344 1627 800 282 .35 11.5 120 184 146 131 109 102 JUNE 202 1565 581 270 .48 8.4 183 279 214 187 167 148 137 JULY 129 532 286 107 . 37 4.1 AUGUST 264 .25 2.5 98 172 42 SEPTEMBER 104 267 158 38 .24 2.3

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1933-82

577

129

.22

100

892

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1933-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1934-82

Q 1

SCHARGE, YEARS, AM							PERIOD (CON-		INTERV	I CFS, FO 'AL, IN Y ICE PROBA	EARS, A	ND ANNUAL	_
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE Days)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
4450	6320	9040	10900	13400	15400	17300							
							1	4980	7020	8230	9610	10500	11400
WEIGHTED	SKEW =	.072					3	3690	5240	6240	7450	8320	9170
							7	2660	3 <b>65</b> 0	4240	4930	5400	5840
							15	1940	2550	2880	3240	3480	3680
							30	1510	1930	2150	2380	2530	2660
							60	1200	1490	1640	1790	1890	1980
							90	1080	1310	1420	1530	1600	1660

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1933-82

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	D PERCE	NT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1560	1160	956	822	725	644	512	408	322	241	205	177	155	138	122

#### 14181500 NORTH SANTIAM RIVER AT NIAGARA, OR

LOCATION.--Lat 44°45'10", long 122°17'50", in NE±NE± sec.34, T.9 S., R.4 E., Linn County, Hydrologic Unit 17090005, on left bank 0.1 mi downstream from Little Sardine Creek, 0.8 mi downstream from Big Cliff Dam, 2.1 mi east of Niagara, and at mile 57.3.

DRAINAGE AREA .-- 453 mi2.

PERIOD OF RECORD.—December 1908 to January 1920, October 1921 to March 1922, October 1938 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "North Fork of Santiam River near Niagara" prior to October 1913, and as "above Mayflower Creek, near Detroit" October 1938 to September 1952.

GAGE.--Water-stage recorder. Datum of gage is 1,093.78 ft National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--Flow regulated since 1953 by Detroit Lake and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--54 years (water years 1910-19, 1939-82), 2,335 ft<sup>3</sup>/s, 70.00 in/yr, 1,692,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD. -- Maximum discharge, 63,200 ft<sup>3</sup>/s Nov. 22, 1909, gage height, 16.4 ft, from floodmark, site and datum then in use, from rating curve extended above 35,000 ft<sup>3</sup>/s; minimum, 19 ft<sup>3</sup>/s Aug. 21, 1963; minimum daily, 395 ft<sup>3</sup>/s Mar. 25, 26, 1977

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF DETROIT AND BIG CLIFF DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-52

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-52

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	491	2920	1153	717	.62	4.2	1	557	479	443	415		
NOVEMBER	511	5225	2654	1331	.50	9.8	3	560	483	446	417		
DECEMBER	955	9568	3238	2031	.63	11.9	7	567	488	452	424		
IANUARY	1057	6577	2950	1424	.48	10.9	14	581	501	463	434		
EBRUARY	1455	6078	3186	1171	•37	11.7	30	606	518	478	448		
MARCH	1225	5348	2657	925	.35	9.8	60	648	542	499	469		
PRIL	1180	5257	3181	1056	.33	11.7	90	723	582	522	477		
4AY	1394	5694	3127	1230	•39	11.5	120	827	640	559	500		
UNE	721	6101	2283	1238	.54	8.4	183	1210	905	772	676		
JULY	547	3177	1238	657	.53	4.6							
AUGUST	461	1281	761	211	.28	2.8							
SEPTEMBER	502	1278	737	219	.30	2.7							
ANNUAL	1336	3458	2258	541	.24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1912-52

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1912-52

	•			RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, ANI ABILITY.	ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
12800	20500	32600	41400	53300									
							1	14900	22900	28500	35800		
WEIGHTE	D SKEW =	072					3	11400	17500	21900	27900		
							7	8790	12600	15000	17900		
							15	6560	8990	10500	12200		
							30	5180	6850	7820	8920		
							60	4360	5620	6330	7100		
							90	3920	4910	5420	5960		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-52

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5830	4580	3770	3270	2890	2560	2070	1680	1360	1060	907	79 <b>1</b>	706	622	543

### 14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF DETROIT AND BIG CLIFF DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1954-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1955-82

		MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	L, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
CTOBER	1837	3828	2517	540	.21	8.8	1	832	665	569	489	403	
IOVEMBER	2200	6075	3665	1126	.31	12.8	3	909	731	619	523	419	
ECEMBER	932	9208	4247	1964	.46	14.9	7	937	756	645	551	448	
ANUARY	880	7888	3579	1697	.47	12.5	14	966	780	669	575	472	
EBRUARY	665	5843	2252	1433	.64	7.9	30	1010	805	688	590	484	
IARCH	508	6990	1737	1228	.71	6.1	60	1090	882	773	685	59 t	
PRIL	465	3692	1836	808	.44	6.4	90	1240	995	874	778	676	
IAY	651	4033	2460	993	.40	8.6	120	1360	1080	944	838	727	
UNE	681	4263	1944	895	.46	6.8	183	1660	1350	1200	1080	954	
ULY	848	1868	1218	243	.20	4.3							
UGUST	837	1719	1225	232	.19	4.3							
EPTEMBER		2394	1858	284	.15	6.5							
NNUAL	1206	3490	2379	498	.21	100							
I SCHARGE,	BASE	ON PERIO	DD OF RE	CORD  CURRENCE	OUS PEAK !	 , 1N		BASE	ED ON PER	RIOD OF F	RECORD 1	TED RECU	- <b></b>
I SCHARGE,	BASE	ON PERIO	DD OF RE	CORD  CURRENCE	INTERVAL,	 , 1N	PERIOD (CON- SECU-	BASE	ED ON PER HARGE, IN INTERV	RIOD OF F	RECORD 1	954 <b>-</b> 82	RRENCE
SCHARGE, YEARS, A	BASE	FOR INDIC	OD OF RE	CORD  CURRENCE ABILITY,	INTERVAL,	, IN NT	PERIOD (CON-	BASE	ED ON PER HARGE, IN INTERV	RIOD OF F	RECORD 1	954-82 TED RECUR	RRENCE
SCHARGE, YEARS, A	BASE , IN CFS, AND ANNUAL	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	DISCH	ED ON PER HARGE, IN INTERV EXCEEDAN	I CFS, FO	RECORD 1  OR INDICA  YEARS, AN  ABILITY,  25	954-82  TED RECUFID ANNUAL IN PERCEN	RRENCE
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ED ON PER HARGE, IN INTERV EXCEEDAN	I CFS, FO	RECORD 1  OR INDICA  YEARS, AN  ABILITY,  25	954-82  TED RECUFID ANNUAL IN PERCEN	RRENCE
SCHARGE, YEARS, A	BASE	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC VAL, IN N ICE PROBA	DR INDICA YEARS, AN ABILITY, 25 4%	954-82 TED RECURID ANNUAL IN PERCEN 50 2%	RRENCE
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERVEXCEEDAN 20%	I CFS, FO VAL, IN Y ICE PROBA	DR INDICA FEARS, AN ABILITY, 25 4%	954-82 TED RECUFID ANNUAL IN PERCENTED 2%	RRENCE
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	1 CFS, FC (AL, IN ) ICE PROBA 10 10%	DR INDICA YEARS, AN ABILITY, 25 4% 15100 14300	954-82 ITED RECUFI ID ANNUAL IN PERCEN	100 17
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, IN INTERVENCEDAN 5 20%	10 OF F	DR INDICA (EARS, AN ABILITY, 25 4% 15100 14300 13500	954-82  TED RECUF ID ANNUAL IN PERCEN  50 2%  15200 14400 13800	100 17
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  11700 11200 9690 7400	HARGE, IN INTERVEXCEEDAN  5 20%  13900 13200 11900 9540	10 OF F	DR INDICA FEARS, AN ABILITY, 25 4% 15100 14300 13500 12000	954-82	100 17
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 2 50% 11700 11200 9690 7400 5670	HARGE, IN INTERVEXCEEDAN 5 20%	I CFS, FC I CFS, FC I CFS, FC I CFS, FC I CFS, FC I CFS, FC I CFS, FC I CFS I	DR INDICA (EARS, AN BEILITY, 25 4% 	954-82  ITED RECUE ID ANNUAL IN PERCEN  50 2%  15200 14400 13800 12900 9930	100 15
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC	DO OF RECOME AND ADDRESS OF RECOME AND ADDRESS OF RECOME AND ADDRESS OF RECOME AND ADDRESS OF RECOME A	CORD  CURRENCE ABILITY,  25 4\$   N TABLE	INTERVAL, IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCH 2 50% 11700 11200 9690 7400 5670 4570 4120 OF RECC	HARGE, IN INTERVEXCEEDAN  13900 13200 11900 9540 7270 5800 5180	10 OF F	DR INDICA CEARS, AN BILITY, 25 4% 15100 14300 12000 9230 7390 6440	954-82  ITED RECUID ANNUAL IN PERCEN  50 2%  15200 14400 13800 12900 9930 7980	100 19
ISCHARGE, YEARS, A 1.25 80%  WEIGHTED	BASE	FOR INDIC EXCEEDAN 5 20%	DO OF RECOME TO THE PROPERTY OF THE PROPERTY O	CORD  CURRENCE ABILITY,  25 4%  N TABLE  CFS, WHI	INTERVAL IN PERCEI 50 2%  OF DAILY N	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 15 30 60 90 FOR PERIOD	DISCH 2 50% 11700 11200 9690 7400 4570 4120 OF RECC	13900 13200 113200 11900 9540 7270 5800 5180	10 CFS, FC (AL, IN ) (ICE PROBA-10) (10%)	DR INDICA (EARS, AN BILITY, 25 4% 15100 14500 12000 9230 7390 6440	954-82  ITED RECUID ANNUAL IN PERCEN  50 2%  15200 14400 13800 12900 9930 7980 6870	100 119
I SCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC	DO OF RECOME AND ADDRESS OF RECOME AND ADDRESS OF RECOME AND ADDRESS OF RECOME AND ADDRESS OF RECOME A	CORD  CURRENCE ABILITY,  25 4\$   N TABLE	INTERVAL IN PERCEI 50 2%  OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 15 30 60 90 FOR PERIOD	DISCH 2 50% 11700 11200 9690 7400 5670 4570 4120 OF RECC	HARGE, IN INTERVEXCEEDAN  13900 13200 11900 9540 7270 5800 5180	10 OF F	DR INDICA CEARS, AN BILITY, 25 4% 15100 14300 12000 9230 7390 6440	954-82  ITED RECUID ANNUAL IN PERCEN  50 2%  15200 14400 13800 12900 9930 7980	100 19

#### 14182500 LITTLE NORTH SANTIAM RIVER NEAR MEHAMA, OR

LOCATION.--Lat 44°47'30", long 122°34'40", in NW\ sec.16, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on left bank 2.0 mi east of Mehama and at mile 2.0.

DRAINAGE AREA.--112 mi $^2$  at cableway 1.2 mi downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1931 to September 1982. Records for July to September 1924 and July to September 1931 at site 4 mi upstream not equivalent owing to difference in drainage areas.

GAGE.--Water-stage recorder. Datum of gage is 655.41 ft National Geodetic Vertical Datum of 1929. Prior to June 12, 1948, nonrecording gage at about same site and datum.

REMARKS.--No regulation or diversion above station. Records herein are for measuring site.

AVERAGE DISCHARGE. -- 51 years, 769 ft<sup>3</sup>/s, 93.24 in/yr, 557,100 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1932-82

10%

1370

1150

1760

2530

25%

971

838

638

470

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.73 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s; minimum, 13 ft<sup>3</sup>/s Aug. 30, 1961.

STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

95%

34

	MINIMIM	MAYIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON- SECU-	DISC		L, IN YE	ARS, AND	ATED RECU ANNUAL I IN PERCU	NON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	26	1594	417	369	.88	4.5	1	29	23	20	19	17	16
NOVEMBER	26	3121	1129	686	.61	12.2	3	29	23	21	19	18	17
DECEMBER	193	3680	1520	772	•51	16.4	7	30	24	22	20	19	18
JANUARY	218	3615	1366	727	.53	14.8	14	32	25	23	21	20	19
EBRUARY	260	2581	1195	546	.46	12.9	30	37	28	25	23	21	20
MARCH	302	2645	1033	451	. 44	11.2	60	49	35	30	27	24	22
APRIL	268	1712	993	303	.31	10.7	90	67	45	37	32	27	25
/AY	241	1439	825	303	.37	8.9	120	104	66	52	43	34	30
JUNE	80	1684	468	299	.64	5.1	183	256	179	148	125	104	92
JULY	45	344	130	68	•52	1.4							
	19	432	66	60	.90	.7							
106031													
	29	490	115	119	1.03	1.2							
SEPTEMBER ANNUAL	29 400 	1146	769 TY 0F IN	165 	.21 OUS PEAK F	100	 MA(		AND PROB				 FLOW
SEPTEMBER ANNUAL MAGNIT	400 TUDE AND BASE	1146 PROBABILI D ON PERIO	769 TY OF IN	165 NSTANTANE CORD 193	.21 OUS PEAK F	100  FLOW , IN	PERIOD	BASE	ED ON PER HARGE, IN	RIOD OF F	RECORD  OR INDICA (EARS, A	1932-82  ATED RECUND ANNUAL	JRRENCE
DISCHARGE,	400 TUDE AND BASE	1146 PROBABILI D ON PERIO	769 TY OF IN	165 NSTANTANE CORD 193	.21 OUS PEAK I 2-82 INTERVAL, IN PERCEI	100  FLOW , IN		BASI D1SC	ED ON PER HARGE, IN	RIOD OF F	RECORD  OR INDICATE  (EARS, AIABILITY,	1932-82 ATED RECUND ANNUAL IN PERCE	JRRENCE
MAGNIT	400  FUDE AND BASE  , IN CFS,	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	769 TY OF INDO OF RECATED RENCE PROE	165 NSTANTANE ECORD 193 CCURRENCE BABILITY,	.21 OUS PEAK I 2-82 INTERVAL, IN PERCEI	100 FLOW , IN	PERIOD (CON- SECU- TIVE	BASI D1SC	HARGE, IN  EXCEEDAN	N CFS, FO VAL, IN N NCE PROBA	RECORD  OR INDICATE  (EARS, AIABILITY,	1932-82 ATED RECUND ANNUAL IN PERCE	URRENCE ENT
MAGNIT DISCHARGE, YEARS, /	400 FUDE AND BASE , IN CFS, AND ANNUA	PROBABILITO ON PERIO	769 TY OF IN DD OF RE CATED RE NCE PROE	165 NSTANTANE ECORD 193 ECURRENCE BABILITY,	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU-	BASE DISCE	HARGE, INTERN	RIOD OF A	RECORD OR INDIC/ (EARS, AI	1932-82 ATED RECUND ANNUAL IN PERCE	URRENCE ENT
MAGNIT DISCHARGE, YEARS, /	400  FUDE AND BASE  , IN CFS, AND ANNUA	PROBABILII D ON PERIO FOR INDIC L EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165  NSTANTANE ECORD 193  ECURRENCE BABILITY,  25 4%	.21 OUS PEAK I 2-82 INTERVAL, IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN	N CFS, FC VAL, IN N NCE PROBA	RECORD OR INDIC/ (EARS, AI ABILITY, 25 4%	ATED RECUND ANNUAL IN PERCE	URRENCE ENT 100
MAGNIT DISCHARGE, YEARS, / 1.25 80%	400  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165 NSTANTANE ECORD 193 ECURRENCE BABILITY, 25 4%	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO VAL, IN N NCE PROBA 10 10%	OR INDIC/ EARS, AI ABILITY, 25 4%	ATED RECUND ANNUAL IN PERCE	19800
MAGNIT MAGNIT DISCHARGE, YEARS, / 1.25 80%	400  FUDE AND BASE  , IN CFS, AND ANNUA	PROBABILII D ON PERIO FOR INDIC L EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165 NSTANTANE ECORD 193 ECURRENCE BABILITY, 25 4%	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI	HARGE, IN INTER EXCEEDAN 5 20%	N CFS, FC VAL, IN N NCE PROB/ 10 10%	OR INDIC/ /EARS, AI ABILITY, 25 4%	1932-82 ATED RECU IND ANNUAL IN PERCE 50 2% 18100 12200	19800 13200
MAGNIT MAGNIT DISCHARGE, YEARS, / 1.25 80%	400  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165 NSTANTANE ECORD 193 ECURRENCE BABILITY, 25 4%	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASI D1 SCH 2 50% 8790 6220 4280	HARGE, IN INTERNAL 5 20%	N CFS, FC VAL, IN N NCE PROB/ 10 10%	25 4% 16400 11100 7210	1932-82 ATED RECU IN PERCE 50 2% 18100 12200 7800	19800 13200 8350
MAGNIT MAGNIT DISCHARGE, YEARS, / 1.25 80%	400  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165 NSTANTANE ECORD 193 ECURRENCE BABILITY, 25 4%	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	D1SCH 2 50% 8790 6220 4280 2980	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FG VAL, IN N NCE PROB/ 10 10% 14000 9610 6340 4320	DR INDIC/ (EARS, AI ABILITY, 25 4% 16400 11100 7210 4900	1932-82 ATED RECUMD ANNUAL IN PERCE 50 2% 18100 12200 7800 5300	19800 13200 8350 5670
MAGNITAL MAG	400  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165 NSTANTANE ECORD 193 ECURRENCE BABILITY, 25 4%	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI 2 50% 8790 6220 4280 2980 2260	HARGE, IN INTERVEXCEEDAN 5 20% 12000 8330 5580 3830 2920	N CFS, FC VAL, IN VICE PROB/ 10 10 10 10 10 10 10 10 10 10 10 10 10 1	25 4% 16400 7210 4900 3820	1932-82 ATED RECUID ANNUAL IN PERCE 50 2% 18100 12200 7800 5500 4160	19800 13200 1480 1480
MAGNIT DISCHARGE, YEARS, / 1.25 80%	400  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165 NSTANTANE ECORD 193 ECURRENCE BABILITY, 25 4%	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASI DISCH 2 50% 8790 6220 4280 2980 2960 1780	HARGE, INTERNEXCEEDAN  12000 8330 5580 3830 2920 2270	N CFS, F( VAL, IN N NCE PROB/ 10 10 % 14000 9610 6340 4320 33330 2570	DR INDIC/ (FARS, AI ABILITY, 25 4% 16400 11100 7210 4900 3820 2920	1932-82  ATED RECL ND ANNUAL IN PERCE 50 2%  18100 12200 7800 5300 4160 4160 4180	19800 13200 8350 4480 3420
MAGNIT	400  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAL 5 20%	769  TY OF INDD OF RECATED RENCE PROB	165 NSTANTANE ECORD 193 ECURRENCE BABILITY, 25 4%	.21 OUS PEAK I 2-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI 2 50% 8790 6220 4280 2980 2260	HARGE, IN INTERVEXCEEDAN 5 20% 12000 8330 5580 3830 2920	N CFS, FC VAL, IN VICE PROB/ 10 10 10 10 10 10 10 10 10 10 10 10 10 1	25 4% 16400 7210 4900 3820	1932-82 ATED RECUID ANNUAL IN PERCE 50 2% 18100 12200 7800 5500 4160	19800 13200 1480 1480

175

120

83

59

44

319

14183000 NORTH SANTIAM RIVER AT MEHAMA, OR

LOCATION.--Lat 44°47'20", long 122°37'00", In NW± sec.18, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on right bank 300 ft downstream from highway bridge at Mehama, 0.5 mi downstream from Little North Santiam River, and at mile 38.71.

DRAINAGE AREA.--655 mi $^2$ , at cableway 0.8 mi downstream, where all discharge measurements are made.

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to September 1914, September 1921 to September 1982. Monthly discharge only September 1921, published in WSP 1318. Prior to October 1913, published as North Fork of Santiam River at Mehama.

GAGE.--Water-stage recorder. Datum of gage is 602.49 ft National Geodetic Vertical Datum of 1929. Prior to June 15, 1933, nonrecording gage at site 100 ft upstream at same datum.

REMARKS.--Flow regulated since 1953 by Detroit Lake and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--66 years (water years 1906, 1911-14, 1922-82), 3,367 ft3/s, 2,439,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 76,600 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 15.37 ft, from rating curve extended above 36,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 17.5 ft Nov. 20, 1921, from graph based on gage readings, and Jan. 6, 1923, from floodmark, at site then in use; minimum discharge, 254 ft<sup>3</sup>/s Aug. 3, 1970; minimum daily, 420 ft<sup>3</sup>/s Sept. 18, 1924.

#### STATISTICAL SUMMARIES (BEFORE CONSTRUCTION OF DETROIT AND BIG CLIFF DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES	1906-52	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLO
		BASED ON PERIOD OF RECORD 1907-52

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		IARGE, IN INTERVAL EXCEEDAN	, IN YEAR	RS, AND A	ANNUAL N	ON-
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	526	5040	1664	1143	.69	4.2	1	589	508	470	440	410	
NOVEMBER	495	10330	4425	2784	.63	11.2	3	595	513	475	446	415	
DECEMBER	1482	9999	4829	2049	.42	12.2	7	601	517	479	449	419	
JANUARY	1029	11230	4873	2447	.50	12.3	14	616	529	488	457	424	
FEBRUARY	1884	11410	4986	2456	.49	12.6	30	647	547	501	467	431	
MARCH	1686	9465	4273	1458	• 34	10.8	60	693	573	526	492	461	
APRIL	1600	7559	4541	1449	.32	11.5	90	774	622	559	514	470	
MAY	1750	7949	4208	1631	• 39	10.6	120	899	687	605	549	495	
JUNE	852	7802	2830	1479	.52	7.2	183	1450	1080	934	831	732	
JULY	626	2259	1242	438	. 35	3.1							
AUGUST	507	1520	781	196	.25	2.0							
SEPTEMBER	508	1910	861	352	.41	2.2							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1906-52

702

.22

100

3251

ANNUAL

2061

4325

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906-52

					CE INTER		PERIOD (CON-	DISC	INTER	/AL, ÎN `	YEARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20%	10 10 <b>%</b>	25 4%	50 2%	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
23900	34200	48700	58300	70600	79800								
							1	27300	38400	45700	54900	61800	
WE I GHTE	D SKEW =	069					3	20100	28300	34000	41300	46800	
							7	15000	19900	22700	25800	27900	
							15	10900	14300	16400	18900	20700	
							30	8530	10700	11900	13200	14100	
							60	6770	8180	8920	9710	10200	
							90	6100	7170	7690	8200	8500	

#### DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-52

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCENT	OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
8990	6660	5540	4790	4250	3780	2990	2350	1780	1240	1020	872	757	668	576

### 14183000 NORTH SANTIAM RIVER AT MEHAMA, OR--Continued

### STATISTICAL SUMMARIES (AFTER COMPLETION OF DETROIT AND BIG CLIFF DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1954-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1955-82

	Manadana	MAN VI MININA	MEAN	STAN- DARD DEVIA-	COEFFI-	F OF	PERIOD (CON-	0130	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ION-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100
OCTOBER	1949	5109	2960	897	•30	7.0	1	1050	934	872	821	765	
NOVEMBER	2502	9857	5218	1987	.38	12.4	3	1080	956	888	833	772	
DECEMBER	1183	14300	6717	3195	.48	15.9	7	1110	979	906	847	780	
JANUARY	1212	11430	5745	2630	. 46	13.6	14	1140	997	922	861	793	
EBRUARY	1048	9197	4057	2136	•53	9.6	30	1170	1030	959	903	842	
MARCH	1579	10890	3280	1847	.56	7.8	60	1260	1110	1050	994	940	
APRIL	1624	5714	3287	1146	.35	7.8	90	1420	1230	1140	1070	1000	
MAY	1136	5897	3600	1248	.35	8.5	120	1600	1380	1280	1200	1120	
JUNE	1023	5521	2570	1186	.46	6.1	183	2070	1750	1590	1480	1350	
JULY	1032	2318	1412	309	.22	3.3							
AUGUST	918	1833	1335	245	.18	3.2							
SEPTEMBER	1485	2800	2001	339	.17	4.7							
ANNUAL	1743	5255	3513	774	.22	100							
DISCHARGE,	BASE IN CFS,		OD OF RE	CORD  CURRENCE	INTERVAL	., IN		BASE	ED ON PER	RIOD OF F	RECORD 1	AL HIGH F	
Olscharge,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD  CURRENCE	INTERVAL	., IN	PERIOD (CON-SECU-	BASE	HARGE, IN	RIOD OF F	RECORD 1	1954 <b>-</b> 82	 RRENCE
) SCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL	., IN ENT	PERIOD (CON-	BASE	HARGE, IN	RIOD OF F	RECORD 1	1954-82 TED RECU	 RRENCE
OISCHARGE, YEARS, A	BASE IN CFS, IND ANNUA	FOR INDIO	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	., IN ENT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	N CFS, FC /AL, IN N NCE PROB/ 10	RECORD 1	ATED RECU (D ANNUAL IN PERCE 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	., IN ENT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO (AL, IN ) NCE PROB/ 10%	DR INDICATE OF THE PROPERTY OF	1954-82  ATED RECU ID ANNUAL IN PERCE 50 2% 24800	RRENCE
OISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	., IN ENT	PERIOD (CON- SECU- TIVE DAYS) 1	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	10 OF F	OR INDICA YEARS, AN ABILITY,  25 4%  24100 17500	1954-82 ATED RECU IND ANNUAL IN PERCE 50 2% 24800 17600	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	., IN ENT	PERIOD (CON-SECU-TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20% 21000 16600 15100	10 OF F	25 4% 24100 17500 16200	1954-82 ATED RECU ID ANNUAL IN PERCE 50 2% 24800 17600 16400	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	., IN ENT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASE DISCH 2 50% 16700 14400 12800 11100	ED ON PER HARGE, IN INTERN EXCEEDAN 5 20% 21000 16600 15100 13400	10 OF F	24100 17500 16200 14900	1954-82 ATED RECU ANNUAL IN PERCE 50 2% 24800 17600 16400 15100	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	., IN ENT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 16700 14400 12800 11100 8880	HARGE, IN INTERIECCEDAN 5 20% 21000 16600 15100 11200	10 10% 22700 17200 17300 17300	24100 17500 16200 13300	1954-82  INTED RECURD ANNUAL IN PERCE  50 2%  24800 17600 16400 15100 13900	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	., IN ENT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASE DISCH 2 50% 16700 14400 12800 11100	ED ON PER HARGE, IN INTERN EXCEEDAN 5 20% 21000 16600 15100 13400	10 OF F	24100 17500 16200 14900	1954-82 ATED RECU ANNUAL IN PERCE 50 2% 24800 17600 16400 15100	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RE NCE PROB	CORD  CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  16700 14400 11100 8880 7160 6510  OF RECC	HARGE, IN INTERN EXCEEDAN 16600 15100 11200 9240 8300 PRD 1954-	22700 17500 10% 22700 17200 17300 12300 10300 9190	24100 17500 16200 11400 10100	24800 17600 16400 15100 12100	RRENCE
YEARS, A  1.25 80%  WEIGHTED	BASE IN CFS, IND ANNUA 2 50% 3 SKEW =	FOR INDICATE OF THE PROPERTY O	DD OF RECEASED OF RECEASED RESIDENCE PROBE	CORD  CURRENCE ABILITY,  25 4%  N TABLE  CFS, WHI	INTERVAL IN PERCE 50 2% OF DAILY	, IN ENT  100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCH 2 50% 16700 14400 12800 7160 6510 OF RECC	21000 15100 11200 2240 21000 16600 15100 11200 9240 8300 0RD 1954-	22700 17200 17200 17200 17300 17300 17300 17300 17300 17300 17300 17300 17300 17300 17300 17300 17300	25 4 100 17500 16200 11400 10100	24800 17600 15100 15100 1290 17600 15100 15100 12100 10600	100 1%
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RE NCE PROB	CORD  CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCH  2 50%  16700 14400 11100 8880 7160 6510  OF RECC	HARGE, IN INTERN EXCEEDAN 16600 15100 11200 9240 8300 PRD 1954-	22700 17500 10% 22700 17200 17300 12300 10300 9190	24100 17500 16200 11400 10100	24800 17600 16400 15100 12100	RRENCE

87

### 14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR

LOCATION.--44°23'35", long 122°30'35", in SE½ sec.36, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, on left bank 100 ft downstream from bridge at Cascadia ranger station, 0.5 mi downstream from Mouse Creek, 0.5 mi upstream from Deer Creek, 1.5 mi southwest of Cascadia, and at mile 48.5.

DRAINAGE AREA.--174 mi<sup>2</sup>, at gaging cable 0.7 mi upstream.

PERIOD OF RECORD.--September 1935 to September 1982. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 759.88 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1935, nonrecording gage.

REMARKS.--No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--47 years, 821 ft3/s, 64.08 in/yr, 594,800 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.68 ft, from rating curve extended above 14,000 ft<sup>3</sup>/s; minimum, 23 ft<sup>3</sup>/s Dec. 1, 2, 1936.

#### STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

3130

2710

3390

2900

3640

3070

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, !	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	34	1296	312	297	.95	3.2	1	48	39	34	31	27	25
NOVEMBER	28	2442	1062	683	.64	10.7	3	48	39	35	32	28	<b>2</b> 6
DECEMBER	82	4319	1568	932	.59	15.9	7	50	41	36	33	29	<b>2</b> 6
JANUARY	107	3278	1464	823	• 56	14.8	14	53	43	38	34	. 30	28
FEBRUARY	130	3260	1371	625	.46	13.9	30	59	47	41	37	33	30
MARCH	324	2913	1150	483	.42	11.6	60	70	54	47	42	37	34
APRIL	356	2053	1133	342	.30	11.5	90	83	61	53	47	42	39
MAY	296	1639	951	365	. 38	9.6	120	114	79	65	56	47	42
JUNE	104	1261	527	298	•57	5.3	183	263	178	143	119	95	82
JULY	54	407	170	79	<b>.4</b> 6	1.7							
AUGUST	39	222	81	30	•37	•8							
SEPTEMBER	45	318	100	68	•68	1.0							
ANNUAL	359	1280	821	200	.24	100							

DISCHARGE YEARS,		S, FOR IN					PERIOD (CON-	DISC		VAL, ÍN '	OR INDICA YEARS, AN	ND ANNUA	L
1.25 80%	<b>2</b> 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	 2 50%	5 20%	10	25 4%	50 2%	100
8020	11900	17300	21000	25700	29200	32800							
							1	8940	12900	15400	18300	20400	22300
WEIGHTE	D SKEW :	117					3	6530	9290	11000	13100	14600	16000
							7	4610	6270	7240	8340	9070	9730
							15	3190	4170	4720	5330	5720	6080
							30	2460	3170	3580	4030	4320	4590

60

90

1920

1740

2440

2180

2760

2430

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	Ξ		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2660	1840	1480	1260	1070	927	687	499	337	182	132	98	78	64	52

#### 14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR

LOCATION.--Lat 44°30'55", long 122°22'15", in NEt sec.19, T.12 S., R.4 E., Linn County, Hydrologic Unit 17090006, on right bank 5.6 mi downstream from Bear Creek, 10 mi northeast of Cascadia, and at mile 17.5.

DRAINAGE AREA .-- 104 mi 2.

1970

1370

1120

945

807

701

534

406

272

157

122

96

76

51

PERIOD OF RECORD.--August 1963 to September 1981.

GAGE.--Water-stage recorder. Altitude of gage is 1,040 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years, 630 ft<sup>3</sup>/s, 82.26 in/yr, 456,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 15.75 ft, from floodmark, from rating curve extended above 7,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 28 ft<sup>3</sup>/s Oct. 17, 26, 27, 1974.

#### STATISTICAL SUMMARIES

	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1964-81		MA				OF ANNUAL RECORD 19		)W
	MINIMUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	_, IN YE	OR INDICAT ARS, AND A ABILITY, I	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	40	575	208	164	.79	2.8	1	45	36 77	33	30		
NOVEMBER	167	1739	801	500	.62	10.6	3	45	37	33	30		
DECEMBER	121	3356	1274	795	•62	16.8	7	46	38	34	31		
JANUARY	169	2244	1260	599	• 48	16.7	14	50	40	36	33		
FEBRUARY	178	1851	883	435	.49	11.7	30	56	45	40	36		
MARCH	354	2218	796	431	•54	10.5	60	67	52	46	42		
APRIL	409	1273	807	272	.34	10.7	90	80	61	53	48		
MAY	342	1296	781	310	-40	10.3	120	99	75	65	58		
JUNE	152	986	426	260	.61	5.6	183	198	148	127	113		
JULY	79	242	141	54	. 39	1.9							
AUGUST	46	166	84	31	•37	1.1							
SEPTEMBER	43	218	102	63	•61	1.3							
ANNUAL 	286  TUDE AND	976  PROBABILI	630 TY OF IN	176 	.28 	100  FLOW	 MA(	 SNITUDE	AND PROE	BABILITY	OF ANNUAL		
MAGNI DISCHARGE, YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASE DISCH	IARGE, IN	RIOD OF F	OF ANNUAL RECORD 19 OR INDICAT YEARS, AND	P64-81  ED RECUR  ANNUAL	RENCE
MAGNITO	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	IARGE, INTERVENCE	CFS, FO	RECORD 19  OR INDICAT (FEARS, AND ABILITY, I	P64-81  ED RECUR  ANNUAL  N PERCEN	RENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PERILIPED ON	CE PROB	RECORD 19  OR INDICAT (FEARS, AND ABILITY, 1	P64-81  FED RECUR  ANNUAL  N PERCEN	RENCE
MAGNITO	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	IARGE, INTERVENCE	CFS, FO	RECORD 19  OR INDICAT (FEARS, AND ABILITY, I	P64-81  ED RECUR  ANNUAL  N PERCEN	RENCE
MAGNITO	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER INTERNEXCEEDAN 5 20%	I CFS, FC VAL, IN N ICE PROBA	RECORD 19  OR INDICAT FEARS, AND ABILITY, 1  25 4%	P64-81  FED RECUR  ANNUAL  N PERCEN	RENCE
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILID ON PERI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERVEXCEEDAN	I CFS, FC (AL, IN ) ICE PROBA 10 10 11100	RECORD 19 OR INDICAT (FARS, AND (FARS, AND (FARS) (	ED RECUP O ANNUAL N PERCEN 50 2%	RENCE
MAGNI	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER INTERNEXCEEDAN 5 20%	10 OF F	PRECORD 19 PRECORD 19	P64-81  FED RECUR  ANNUAL  N PERCEN	RENCE
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILID ON PERI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2 50%  6280 4750 3450	D ON PER IARGE, IN INTERV EXCEEDAN 5 20% 9360 7070 4870	10D OF FOR A CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF T	13000 13000 6540	P64-81  TED RECUF  O ANNUAL  N PERCEN  50  2%	RENCE
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILID ON PERI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	D1SCH  2 50%  6280 4750 3450 2420	D ON PER IARGE, IN INTERV EXCEEDAN 5 20% 9360 7070 4870 3240	10 OF F	DR INDICAT YEARS, AND ABILITY, 1 25 4% 13000 10200 6540 4190	P64-81  PED RECUF  ANNUAL  N PERCEN  50  2%	RENCE
MAGNITURE TO THE MAGNIT	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILID ON PERI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  6280 4750 3450 2420 1830	9360 7070 9360 7070 93240 2470	10 10% 10 10% 10 10% 1100 8500 5670 3700 2860	13000 10200 640 4190 3320	P64-81  TED RECUF  O ANNUAL  N PERCEN  50  2%	RENCE
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILID ON PERI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	D1SCH  2 50%  6280 4750 3450 2420	D ON PER IARGE, IN INTERV EXCEEDAN 5 20% 9360 7070 4870 3240	10 OF F	DR INDICAT YEARS, AND ABILITY, 1 25 4% 13000 10200 6540 4190	P64-81  PED RECUF  ANNUAL  N PERCEN  50  2%	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILID ON PERI	TY OF IN OD OF RE	ISTANTANE CCORD 196 CCURRENCE SABILITY, 25 4%	OUS PEAK 4-81 INTERVAL IN PERCE	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  6280 4750 3450 2420 1830 1450 1280	9360 7070 4870 9360 7070 4870 2470 1930 1670	10 10% 1100 OF II 10 10% 10 10% 11100 8500 5670 2860 2240 1930	13000 10200 6540 4190 2630	P64-81  PED RECUF  ANNUAL  N PERCEN  50  2%	RENCE
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20% 11500 1	TY OF IN OD OF RECATED RENCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4\$ 8000	OUS PEAK 4-81  INTERVAL IN PERCE 50 2%  OF DAILY	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  6280 4750 2420 1830 1450 1280  OF RECC	10 ON PER 1 INTERN EXCEEDAN 5 20% 9360 7070 4870 3240 2470 1930 1670	100 OF I	DR INDICAT (EARS, AND ABILITY, 1 25 4% 13000 10200 6540 4190 3320 2630 2260	P64-81  PED RECUF  ANNUAL  N PERCEN  50  2%	RENCE

14185900 OUARTZVILLE CREEK NEAR CASCADIA. OR

LOCATION.--Lat 44°32'25", long 122°26'05", in NW± sec.10, T.12 S., R.3 E., Linn County, Hydrologic Unit 17090006, on Bureau of Land Management land, on right bank 80 ft downstream from Panther Creek, 10 mi north of Cascadia, and at mile 6.6.

DRAINAGE AREA .-- 99.2 mi2.

PERIOD OF RECORD.--August 1963 to November 1964 (destroyed by flood of December 1964); October 1965 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,050 ft, from topographic map. Aug. 13, 1963, to Dec. 22, 1964, water-stage recorder on left bank at present datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years (water years 1964, 1966-82), 676 ft<sup>3</sup>/s, 92.54 in/yr, 489,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 16.38 ft; minimum, 14 ft<sup>3</sup>/s Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft<sup>3</sup>/s Dec. 22, 1964, from slope-area measurement of peak flow.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAF CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	30	753	268	233	.87	3.3	1	27	20	18	16		
NOVEMBER	155	2224	971	611	.63	12.0	3	27	21	18	16		
DECEMBER	110	2897	1426	780	.55	17.6	7	28	21	18	16		
JANUARY	157	2450	1381	662	.48	17.0	14	30	22	19	17		
FEBRUARY	208	2441	1079	597	.55	13.3	30	34	26	23	21		
MARCH	329	2018	901	422	.47	11.1	60	46	33	29	26		
APRIL	382	1245	840	251	.30	10.3	90	61	42	35	31		
MAY	243	1114	660	247	•37	8.1	120	85	56	46	39		
JUNE	97	711	327	205	.63	4.0	183	190	131	107	90		
JULY	54	187	97	41	.42	1.2							
AUGUST	26	240	65	49	.76	.8							
SEPTEMBER	29	268	105	86	.82	1.3							
ANNUAL	311	1113	676 <sup>′</sup>	197	.29	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-82 RQ

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
8270	11500	16700	20700	26500									
							1	8220	11000	12500	14200		
<b>WE I GHTE</b> I	SKEW =	501					3	5990	7860	8850	9880		
							7	4350	5610	6230	6810		
							15	2890	3690	4100	4520		
							30	2130	2710	3020	3340		
							60	1670	2140	2430	2780		
							90	1480	1880	2140	2450		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-82

		DISC	ARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70 <b>%</b>	75%	80%	85%	90%	95%
2420	1570	1200	975	820	700	521	373	239	134	96	71	54	42	33

#### 14186000 MIDDLE SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°27'35", long 122°31'25", in SE½ sec.2, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, 0.5 mi upstream from Green Peter Creek and 8 mi northeast of Foster.

DRAINAGE AREA. -- 271 mi2.

PERIOD OF RECORD. -- August 1931 to September 1947.

GAGE.--Staff gage. Datum of gage is 733.44 ft National Geodetic Vertical Datum of 1929 (Northern Pacific Railway benchmark). Prior to Sept. 14, 1931, staff gage and Sept. 14, 1931, to Dec. 17, 1946, water-stage recorder, at same site and datum.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--16 years (water years 1932-47), 1,449 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 21.6 ft, from rating curve extended above 24,000 ft<sup>3</sup>/s by logarithmic plotting; minimum, 54 ft<sup>3</sup>/s Dec. 1, 1936, gage height, 1.25 ft.

#### STATISTICAL SUMMARIES

07111	_					
		MSED ON	I FENTOD C	I NECO	יככיפו טאוי	-4/
		ACED ON	PERIOD C	E DECA	DD 1033-	-47
MONTHLY AND ANNUAL MEAN DISCHARGES 1	1932-4/ MAGNII	JUE ANU	PROBABILI	IT OF	ANNUAL LO	JW FLOW
MONTHLY AND ANNUAL MEAN DISCHARGES	OZO 47 MACULT	IDE AND	DDADADIII	TV OF	A MANUTAL TO	NA CLOW

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 2 <b>0%</b>	10 10%	2 <b>0</b> 5 <b>%</b>	50 2%	100 1%
OCTOBER	74	975	421	305	•72	2.4	1	77	65	60	56		
NOVEMBER	65	5397	1988	1454	.73	11.4	3	78	66	61	57		
DECEMBER	582	5741	2792	1650	.59	16.0	7	80	67	62	58		
JANUARY	491	5351	2471	1196	.48	14.2	14	84	69	63	59		
FEBRUARY	780	4041	2156	947	.44	12.4	30	92	76	69	65		
MARCH	648	5998	2383	1168	.49	13.7	60	107	85	76	70		
APRIL	547	4042	2140	909	.42	12.3	90	124	97	88	83		
MAY	487	3059	1509	802	.53	8.7	120	174	121	102	89		
JUNE	220	3530	984	830	.84	5.6	183	420	282	230	194		
JULY	126	614	294	130	.44	1.7							
AUGUST	80	199	134	38	.28	.8							
SEPTEMBER	83	581	163	133	.82	.9							
ANNUAL	913	2178	1449	352	.24	100							

MAGN I TUDE	AND PROBABILITY	OF	INSTANTANEOUS PEAK	FLOW
	BASED ON PERIOD	OF	RECORD 1932-47	

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-47

				RECURRENC ROBABILITY			PERIOD (CON-	DISCI	INTER	VAL, ÍN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 5 <b>0%</b> 	5 20 <b>%</b>	10 10 <b>%</b>	25 4 <b>%</b>	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100
5500	20900	28400	33500	40000									
							1	15500	22100	26800	33300		_
IE I GHTE	D SKEW =	108					3	11200	16500	20400	25600		-
							7	8110	11400	13500	15800		-
							15	5760	7840	9110	10600		-
							30	4470	5870	6630	7430		_
							60	3580	4570	5110	5690		-
							90	3160	3900	4290	4690		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-47

		DISC	HARGE, I	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85%	90%	95%
4690	3350	2740	2280	1950	1640	1180	846	555	301	211	161	126	104	83

91

14186500 MIDDLE SANTIAM RIVER AT MOUTH, NEAR FOSTER, OR

LOCATION.--Lat 44°25'25", long 122°37'25", in NE¦SE; sec.24, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on right bank 2.7 mi northeast of Foster, and at mile 0.7.

DRAINAGE AREA .-- 287 m12.

PERIOD OF RECORD. -- October 1950 to September 1966. Prior to January 1951 monthly discharge only, published in WSP 1738.

GAGE.--Water-stage recorder. Datum of gage is 562.14 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Oct. 25, 1952, staff gage at same site and datum.

REMARKS. -- Slight regulation from construction of Green Peter Dam above station.

MONTHLY AND ANNUAL MEAN DISCHARGES 1951-66

AVERAGE DISCHARGE. -- 16 years, 1,775 ft3/s, 1,285,000 acre-ft/yr.

19600 27500 38900 46900 57500

WEIGHTED SKEW =

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 67,800 ft $^3$ /s Dec. 22, 1964, gage height, 25.80 ft, from rating curve extended above 34,000 ft $^3$ /s on the basis of slope-area measurement of peak flow; minimum, 66 ft $^3$ /s Sept. 10, 1966.

#### STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1952-66 STAN-DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-DARD COEFFI-PERCENT PERIOD EXCEEDANCE PROBABILITY, IN PERCENT DEVIA-CIENT OF (CON-MINIMUM MAXIMUM MEAN TION VARI-ANNUAL SECU-MONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 100 DAYS) 50% 20% 10% 5% 2% 1% **OCTOBER** 85 2590 899 802 .89 4.2 101 84 77 72 NOVEMBER 126 2524 .56 11.8 73 4660 1411 102 85 78 DECEMBER 1066 9077 3493 2221 .64 16.3 105 87 79 74 JANUARY 7270 77 7**5**8 3189 14.9 110 **FEBRUARY** 1290 6405 3017 1368 .45 30 100 124 90 83 \_\_ MARCH 1039 4015 2360 865 .37 11.0 60 155 121 105 94 APRII 1520 3427 2473 559 . 23 11.6 90 178 138 122 111 3017 MAY 850 1822 694 .38 8.5 120 232 171 149 135 JUNE 365 2162 907 516 . 57 4.2 183 549 30/ 332 289 JULY 177 714 325 143 .44 1.5 **AUGUST** 106 235 168 42 . 25 .8 SEPTEMBER 96 749 203 162 .80 .9 ANNUAL 1257 1775 2445 265 . 15 100 MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1951-66 BASED ON PERIOD OF RECORD 1951-66 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN DISCHARGE. IN CFS. FOR INDICATED RECURRENCE YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT INTERVAL, IN YEARS, AND ANNUAL PERIOD EXCEEDANCE PROBABILITY, IN PERCENT (CON-100 SECU-80% 50% 20% 10% 4% 2% 1% TIVE 5 100

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1951-66

DAYS)

15

30

60

90

50%

20200

14600

9470

6790

5160

4040

3660

20%

29500

21000

13300

9000

6970

5290

4620

10%

36100

26000

16400

10600

8280

6160

5270

4%

45100

33300 20900

12700

10100

7300

6130

2%

1%

--

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN1	OF TIME	: :		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	7 <b>5%</b>	80%	85%	90%	95%
5540	3970	3150	2630	2220	1930	1470	1100	745	405	282	216	173	140	111

#### 14187000 WILEY CREEK NEAR FOSTER, OR

LOCATION.--Lat 44°22'20", long 122°37'20", in NE±NE± sec.12, T.14 S., R.1 E., Linn County, Hydrologic Unit 17090006, on right bank 0.5 mi downstream from Little Wiley Creek, 3.5 mi southeast of Foster, and at mile 4.4.

DRAINAGE AREA. -- 51.8 mi2.

PERIOD OF RECORD. -- October 1947 to July 1973.

GAGE.--Water-stage recorder. Datum of gage is 716.08 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).
Prior to Apr. 6, 1965, water-stage recorder at present site at datum 2.00 ft higher. Apr. 6 to Aug. 17, 1965, nonrecording gage at present site and datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--25 years (water years 1948-72),  $224 \text{ ft}^3/\text{s}$ , 58.72 ln/yr, 162,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,640 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 9.28 ft, from rating curve extended above 3,700 ft<sup>3</sup>/s; maximum gage height, 11.80 ft, present datum, Dec. 21, 1964 (backwater from debris); minimum discharge, 5.6 ft<sup>3</sup>/s Nov. 26, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1948-72 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1949-72

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	9.7	397	103	97	.94	3.8	1	9.8	7.9	7.0	6.5	5.9	
NOVEMBER	16	620	286	154	.54	10.6	3	10	8.1	7.2	6.6	6.0	
DECEMBER	109	1107	431	250	.58	16.0	7	10	8.5	7.6	7.0	6.4	
JANUARY	82	842	482	246	-51	17.8	14	11	9.0	8.1	7.4	6.7	
FEBRUARY	195	944	416	177	.43	15.4	30	13	10	9.0	8.2	7.5	
MARCH	116	625	354	134	.38	13.1	60	16	12	11	9.6	8.6	
APRIL	133	490	273	87	.32	10.1	90	19	14	12	11	10.0	
MAY	64	353	196	79	.40	7.3	120	26	19	16	14	12	
JUNE	28	165	86	38	.45	3.2	183	60	43	35	30	24	
JULY	17	76	35	18	.52	1.3							
AUGUST	9.3	53	19	9.0	.48	.7							
SEPTEMBER	9.5	68	22	14	.65	.8							
ANNUAL	170	318	224	39	.17	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1948-72

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1948-72

					ICE INTER		PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2380	3550	5380	6740	8620	10100								
							1	2550	3760	4680	5960	7020	
EIGHTED	SKEW =	- 158					3	1950	2720	3280	4040	4650	
							7	1340	1840	2200	2670	3040	
							15	944	1230	1410	1620	1780	
							30	711	876	982	1110	1210	
							60	558	691	784	906	1000	_
							90	492	596	665	755	823	_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-72

_			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	PERCE	NT OF TIM	4E		
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	767	520	409	337	285	242	180	128	80	45	33	24	19	15	12

WILLAMETTE KIVER BASIN

14187500 SOUTH SANTIAM RIVER AT WATERLOO. OR

LOCATION.--Lat 44°29'55", long 122°49'20", in SW‡NW‡ sec.28, T.12 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.1 mi downstream from highway bridge at Waterloo, 2.1 mi upstream from Hamilton Creek, and at mile 23.3.

DRAINAGE AREA .-- 640 mi2.

9570 6650

5370

4510

3840

3300

2460

1770

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to December 1911 (gage heights only January to December 1911), July 1923 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "South Fork of Santiam River at Waterloo" 1905-07, 1910-11.

GAGE.--Water-stage recorder. Datum of gage is 370.39 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at site 0.5 mi downstream at datum about 5.0 ft lower. July 1, 1923, to Nov. 12, 1934, nonrecording gage, at present site and datum.

REMARKS.--Flow regulated since October 1966 by Green Peter Lake and since December 1966 by Foster Lake. No diversion above station.

AVERAGE DISCHARGE.--60 years (water years 1906, 1924-82), 2,935 ft<sup>3</sup>/s, 2,126,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 24.50 ft; minimum, 61 ft<sup>3</sup>/s Oct. 12, 1966.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF GREEN PETER AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1906-65

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-65 93

1.25 80% 26300	2 50% 37900 SKEW =	20% 	DURATIO	0900 9		MEAN FLOW	DAYS)  1 3 7 15 30 60 90  FOR PERIOD		20% 42000 31400 21300 14600 11200 8670 7660	50700 38000 24900 16600 12600 9820 8590	62100 47000 29200 14300 11200 9700	70700 54000 32400 20500 15400 12200 10500	79600 61300 22000 1500 11200
1.25 80% 26300	50%  37900	20% 	66100 8	0900 9			DAYS) 1 3 7 15 30 60 90	29400 22000 15700 11400 8730 6860 6150	20% 42000 31400 21300 14600 11200 8670 7660	50700 38000 24900 16600 12600 9820 8590	62100 47000 29200 18900 14300 11200	70700 54000 32400 20500 15400 12200	79600 61300 35600 22000 16500
1.25 80% 26300	50%  37900	20% 			2200 1040	000	DAYS) 1 3 7 15 30 60	50% 29400 22000 15700 11400 8730 6860	42000 31400 21300 14600 11200 8670	50700 38000 24900 16600 12600 9820	62100 47000 29200 18900 14300 11200	70700 54000 32400 20500 15400 12200	79600 61300 35600 22000 16500
1.25 80% 26300	50%  37900	20% 			2200 1040	000	DAYS) 1 3 7 15 30 60	50% 29400 22000 15700 11400 8730 6860	42000 31400 21300 14600 11200 8670	50700 38000 24900 16600 12600 9820	62100 47000 29200 18900 14300 11200	70700 54000 32400 20500 15400 12200	79600 61300 35600 22000 16500
1.25 80% 26300	50%  37900	20% 			2200 1040	000	DAYS) 1 3 7 15	50% 29400 22000 15700 11400	20% 42000 31400 21300 14600	10% 50700 38000 24900 16600	4% 62100 47000 29200 18900	2% 70700 54000 32400 20500	79600 61300 35600 22000
1.25 80% 26300	50%  37900	20% 			2200 1040	000	DAYS) 1 3 7	50%  29400 22000 15700	20% 42000 31400 21300	10% 50700 38000 24900	4% 62100 47000 29200	2% 70700 54000 32400	100 1% 79600 61300 35600
1.25 80% 26300	50%  37900	20% 			2200 1040	000	DAYS)  1 3	50% 	20% 42000 31400	10%  50700 38000	4% 62100 47000	2% 70700 54000	100 1% 79600 61300
1.25 80% 26300	50%  37900	20% 			2200 1040	000	DAYS) 	50% 	20% 	10 <b>%</b>  50700	4% 62100	2 <b>%</b>  70700	100 1% 79600
1.25 80%	50%	20%			2200 1040	000	DAYS)	50 <b>%</b>	20%	10%	4%	2%	100
1.25 80%	50%	20%			2200 1040	000							100
1.25	_	-	10%										100
1.25	_	-	104			1,0					25	50	
		5	10	25 4%	50 · · · · · · · · · · · · · · · · · · ·	100 1%	SECU- TIVE		 5	10			ENT
							(CON-		EXCEEDAN	ICE PROBA	BILITY,	IN PERCE	
					IN PERCE		PER10D	01301			EARS, AN		
I SCHARGE .	IN CES.	FOR IND	CATED RE	CURRENCE	INTERVAL	IN		DISCH	ARGE IN	CES EC	OR INDICA	TED RECL	IRRENCE
MAGNIT		PROBABIL D ON PER			OUS PEAK F 6-65	FLOW	MA				OF ANNUA		LOW
NNUAL	1704	4552 	2910	680	.23	100							
EPTEMBER	144	1118	321	235	.73	.9							
UGUST	126	385	261	72	.28	•7							
ULY	176	1214	550	250	. 45	1.6							
UNE	437	5906	1721	1111	.65	4.9	183	850	579	474	402	334	295
ΙΑΥ	862	5875	3002	1379	. 46	8.5	120	372	249	204	174	146	131
PRIL	1056	7935	4049	1419	.35	11.4	90	268	196	168	148	129	118
ARCH	1212	10530	4386	1815	.41	12.4	60	225	171	148	131	114	104
EBRUARY	1525	12070	5436	2526	.46	15.3	30	184	146	130	118	107	100
ANUARY	898	12220	5110	2729	.53	14.4	14	164	132	118	109	99	94
ECEMBER	1068	15470	5314	3088	.58	15.0	7	156	126	114	105	96	90
OVEMBER	111	10340	4081	2772	.68	11.5	3	152	124	112	104	- 96	90
CTOBER	143	4898	1192	1146	.96	3.4	1	150	123	111	103	95	90
	(0137	(013)	(0/3)	(013)	ATTON	KONOTT	DAYS)	50 <b>%</b>	20%	10%	5 <b>%</b>	2%	1%
011111	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE	2	5	10	20	50	100
IONTH	MINIMUM	MAXIMUM	MEAN	TION	VARI~	ANNUAL	SECU-		LACELDA	CE FROOF			
				DEVIA-	CIENT OF	OF	(CON-				ABILITY,		
				STAN- DARD	COEFFI-	PERCENT	PERIOD	01301	HARGE, IN		ARS, AND		

### 14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR--Continued

### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF GREEN PETER AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	666	5530	2161	1103	•51	5.9	1	574	478	435	401		
NOVEMBER	1807	9195	4431	2024	.46	12.1	3	581	484	440	406		
DECEMBER	1126	12910	6963	3010	.43	19.1	7	603	499	450	413		
IANUARY	713	9194	6216	2547	.41	17.0	14	613	507	458	420		
EBRUARY	597	8078	3923	2115	.54	10.7	30	641	537	488	450		
MARCH	1115	9649	3184	2245	.71	8.7	60	711	602	555	522		
PRIL	1059	4850	2708	1197	.44	7.4	90	847	689	615	559		
1AY	852	3671	2375	1060	.45	6.5	120	1000	799	701	625		
IUNE	678	3464	1507	873	.58	4.1	183	1370	1080	948	843		
JULY	470	1234	742	178	.24	2.0		1270	1000	740	ر40		
NUGUST	470 475	1234	742 855	218	. 25	2.0							
SEPTEMBER	473			583		4.0							
DEFILMOER	4/3	2769	1469	202	.40	4.0							
ANNUAL	1407	4666	3043	895	.29	100							
	, IN CFS,	FOR INDIC		CURRENCE	INTERVAL				HARGE, IN	CFS, FO	RECORD 19	TED RECUR	RENCE
	, IN CFS,	FOR INDIC	CATED RE	CURRENCE	IN PERCEI	NT 	PERIOD (CON- SECU-		HARGE, IN	CFS, F(		TED RECUR	
YEARS, A	, IN CFS,	FOR INDIC	CATED RE	CURRENCE	IN PERCEI				HARGE, IN	CFS, F(	OR INDICAT	TED RECUR	IT 100
YEARS, A	, IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FC AL, IN Y ICE PROBA	OR INDICA (EARS, AND ABILITY, 25 4%	TED RECUR D ANNUAL IN PERCEN 50 2%	IT 100
YEARS, / 1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	DISCH 2 50%	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC AL, IN N ICE PROBA 10 10%	OR INDICATERS, AND BILITY, 25	TED RECURD ANNUAL IN PERCEN	100 1%
YEARS, A	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	10%	DR INDICA (EARS, ANI ABILITY, 25 4%	TED RECURD ANNUAL IN PERCEN	IT 100
YEARS, / 1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	DISCH 2 50% 15000 13900 12900	HARGE, IN INTERV EXCEEDAN 5 20% 17100 15400 14300	10 10%	DR INDICA (EARS, AND MBILITY, 25 4% 18000 15800 14600	TED RECURD ANNUAL IN PERCEN 50 2%	100 1%
YEARS, / 1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 15000 13900 12900 11000	HARGE, IN INTERV EXCEEDAN 5 20% 17100 15400 14300 13000	10 10% 17700 15700 14500 13700	DR INDICA' (EARS, ANI (BILITY, 25 4% 18000 15800 14600 14100	TED RECUR D ANNUAL IN PERCEN 50 2%	100 1%
YEARS, / 1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	DISCH 2 50% 15000 13900 12900 11000 8900	HARGE, IN INTERV EXCEEDAN 5 20% 17100 15400 14300 13000 11200	10 10%	DR INDICA (EARS, AND MBILITY, 25 4% 18000 15800 14600	TED RECURD ANNUAL IN PERCEN 50 2%	100 1%
YEARS, / 1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 15000 13900 12900 11000	HARGE, IN INTERV EXCEEDAN 5 20% 17100 15400 14300 13000	10 10% 17700 15700 14500 13700	DR INDICA' (EARS, ANI (BILITY, 25 4% 18000 15800 14600 14100	TED RECUR D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE ABILITY,	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	DISCH 2 50% 15000 13900 12900 11000 8900	HARGE, IN INTERV EXCEEDAN 5 20% 17100 15400 14300 13000 11200	10 10% 17700 15700 14500 12200	DR INDICA (EARS, AND BILITY, 25 4% 18000 15800 14600 14100 13200	TED RECUR D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	CATED RE NCE PROB	CURRENCE ABILITY, 25 4%	50 2%	NT	(CON- SECU- TIVE DAYS) 	2 50% 15000 13900 12900 11000 8900 7350 6600	17100 15400 17100 15400 14300 13000 11200 9360 8340	10 CFS, FC AL, IN N CE PROBA- 10 10% 17700 15700 14500 13700 12200 10300 9080	DR INDICATER AND CARS, AND	TED RECUR D ANNUAL IN PERCEN 50 2%	100 1%
YEARS, / 1.25 80%	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAD 5 20%	DURATIO	CURRENCE ABILITY, 25 4%	IN PERCEI	100 1% 	(CON- SECU- TIVE DAYS) 	2 50% 15000 13900 12900 11000 8900 7350 6600	17100 15400 17100 15400 14300 11200 11200 11200 11200 11200 11200 11200 11200 11200 11200	17700 15700 14500 13700 14500 13700 12200 9080	18000 15800 14100 14100 14100 14100 14100 14100 14100 14100 14100	TED RECUR D ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAD 5 20%	DURATIO	CURRENCE ABILITY, 25 4%	IN PERCEI 50 2% OF DAILY I	NT 100 1% MEAN FLOW	(CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	2 50% 15000 13900 12900 11000 8900 7350 6600	17100 15400 17100 15400 14300 11200 11200 11200 11200 11200 11200 11200 11200 11200 11200	17700 15700 14500 13700 14500 13700 12200 9080	18000 15800 14100 14100 14100 14100 14100 14100 14100 14100 14100	TED RECUR D ANNUAL IN PERCEN 50 2%	100 1%

14188800 THOMAS CREEK NEAR SCIO, OR

95

LOCATION.--Lat 44°42'42", long 122°45'55", in SEtSEt sec.11, T.10 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.3 mi upstream from bridge on State Highway 226, 1.6 mi upstream from MIII Creek, 4.2 mi east of Scio, and at mile 14.6.

DRAINAGE AREA .-- 109 mi2.

PERIOD OF RECORD. -- October 1962 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 380.84 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--20 years, 497 ft<sup>3</sup>/s, 61.92 in/yr, 360,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.44 ft, from rating curve extended above 7,200 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 19.58 ft Jan. 21, 1972, backwater from debris; minimum discharge, 7.8 ft<sup>3</sup>/s Aug. 20, 1967.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1963-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1964-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	IN YEAR	R INDICATE RS, AND AN BILITY, IN	INUAL N	-AC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	26	633	179	163	.91	3.0	1	18	13	11	9.8		
NOVEMBER	128	1898	684	426	.62	11.4	3	18	14	12	10		
DECEMBER	104	2310	1160	572	.49	19.4	7	20	15	13	11		
JANUARY	144	1836	1136	5 <b>2</b> 7	.46	19.0	14	21	15	13	12		
FEBRUARY	176	1532	812	367	.45	13.6	30	25	18	15	13 -		
MARCH	245	1504	698	306	.44	11.7	60	32	22	19	16		
APRIL	298	888	568	172	.30	9.5	90	41	27	23	19		
MAY	168	744	378	150	.40	6.3	120	54	36	30	26		
JUNE	74	556	187	118	.63	3.1	183	119	85	71	62		
JULY	30	1 <b>5</b> 5	66	33	•51	1.1							
AUGUST	14	203	43	41	.96	.7							
SEPTEMBER	19	251	68	60	.88	1.1							
ANNUAL	229	760	497	126	.25	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1963-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1963-82

ISCHARGE, YEARS, A				RECURRENC ROBABILIT			PERIOD (CON-		INTERV	AL, ÍN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80 <b>%</b>	2 50% 	5 20 <b>%</b>	10 10%	25 <b>4%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 <b>4%</b>	50 2%	100
4920	7640	12100	15600	20600									
WE I GHTED	CKER	105					1	5200	7320	8660	10300		
WEIGHIED	SKEW =	.185					3	3840	5390	6470	7900		
								3000	4010	4630	5370		
							15	2190	2760	3070	3410		
							30	1680	2070	2250	2440		
							60	1300	1640	1820	2030		
							90	1140	1440	1620	1820		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1963-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
1760	1180	908	744	618	531	390	277	170	92	69	51	38	29	21

#### 14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 122°00'40", in SE½ sec.11, T.10 S., R.3 W., Marion County, Hydrologic Unit 17090005, on right bank 350 ft upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi downstream from confluence of North and South Santiam Rivers, and at mile 9.62.

DRAINAGE AREA. -- 1,790 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1905 to June 1906 (gage heights and discharge measurements only), October 1907 to September 1916, October 1939 to September 1982. Gage-height records collected at same site since 1907 are contained in reports of National Weather Service

GAGE.--Water-stage recorder. Datum of gage is 199.63 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1940, nonrecording gages at sites within 350 ft downstream et datum 3.00 ft higher.

REMARKS.--Flow regulated since 1953 by Detroit Lake, since 1966 by Green Peter Lake and by Foster Lake. Salem Canal diverts from North Santiam River at Stayton for irrigation and power; most of this water reaches Willamette River by way of Mill Creek at Salem. Stayton Canal diverts from North Santiam River at Stayton for irrigation of lands near West Stayton; some return flow reaches North Santiam River above station. Albany power canal diverts from South Santiam River at Lebanon; return flow reaches Willamette River at Albany.

AVERAGE DISCHARGE.--52 years (water years 1908-16, 1940-82), 7,789  $ft^3/s$ , 5,643,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 24.22 ft; minimum observed, 260 ft<sup>3</sup>/s Aug. 15-22, Aug. 24 to Sept. 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 25.0 ft was reached in December 1861, and 23.4 ft in February 1890 (information from Corps of Engineers). On Nov. 21, 1921, the stage reached 19.5 ft at gage on railroad bridge 350 ft downstream, corresponding gage height at present site and datum, 24.4 ft, from curve of relation, discharge, 202,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF DETROIT, GREEN PETER, AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1908-53

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1909-53

	MANIMA	MANTHIN	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	., IN YEA	R INDICAT RS, AND A BILITY, I	ANNUAL NO	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	432	12290	3289	3364	1.02	3.6	1	500	369	316	278		
NOVEMBER	622	26620	11020	6637	.60	12.0	3	503	371	318	281		
DECEMBER	2915	24450	12350	6450	.52	13.5	7	508	376	323	285		
JANUARY	4048	30310	13590	6709	.49	14.8	14	531	394	338	<b>2</b> 99		
FEBRUARY	4325	24980	14200	5656	.40	15.5	30	563	416	360	322		
MARCH	3229	21640	10880	4464	.41	11.9	60	645	481	425	390		
APRIL	<b>2</b> 956	16880	9345	3446	•37	10.2	90	813	565	475	417		
MAY	2946	14720	8275	3248	.39	9.0	120	1190	763	604	497		
JUNE	1033	9233	4789	2205	.46	5.2	183	2580	1830	1520	1290		
JULY	482	7123	1989	1404	.71	2.2							
AUGUST	309	1842	811	373	.46	.9							
SEPTEMBER	416	4086	1071	876	.82	1.2							
ANNUAL	4246	11630	7598	1858	.24	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1908-53

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1908-53

DISCHARGE YEARS,				RECURREN ROBABILIT			PERIOD (CON-	DISC	INTER	VAL, ÍN	OR INDICA YEARS, AN	D ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 4%	50 2%	100
50800	77600	120000	152000	195000				66300	07400	140000	4.47000		
WEIGHTE	D CKEM	= .101					7	66200 51100	97400 71900	118000 84900	143000 100000		
WEIGHTE	U SKEW	101					<i>3</i> <b>7</b>	40300	53900	60700	67400		
							15	29100	36800	40400	43700		
							30	22200	28400	31300	34100		
							60	17500	22000	24200	26400		
							90	15800	19200	20800	22300		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1908-53

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
25000	17000	13500	11400	9940	8690	6730	5160	3640	2010	1370	1020	776	626	483

### 14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF DETROIT, GREEN PETER, AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL N	0N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	2909	11890	5056	2170	.43	5.4	. 1	1300	1170	1110	1050		
NOVEMBER	4431	18390	10420	4351	.42	11.1	3	1330	1190	1120	1060		
DECEMBER	2420	31700	17530	7463	.43	18.7	7	1360	1220	1150	1090		
JANUARY	2178	24520	16070	6555	.41	17.2	14	1410	1260	1180	1110		
FEBRUARY	1897	21250	10770	5308	.49	11.5	30	1510	1330	1230	1150		
MARCH	3474	25700	8749	5487	.63	9.4	60	1740	1460	1330	1230		
APRIL	3874	11930	7045	2626	.37	7.5	90	2080	1700	1520	1370		
MAY	2115	10430	6523	2565	. 39	7.0	120	2500	2020	1780	1600		
JUNE	1733	8558	4230	2233	.53	4.5	183	3370	2760	2490	2290		
JULY	1197	2970	1853	470	.25	2.0							
AUGUST	1100	2883	1907	446	.23	2.0							
SEPTEMBER	1553	5325	3373	917	.27	3.6							
JET TEMBER	1000	7525	3313	917	• 27	J.0							
ANNUAL	3512	11690	7788	2226	. 29	100							
OISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	OUS PEAK I	, IN		BASE	ED ON PER	CFS, FC	OF ANNUAL RECORD 19 DR INDICA	967-82  TED RECU	
OISCHARGE,	BASE IN CFS, ND ANNUA	D ON PERI	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN	PERIOD (CON- SECU-	BASE	ED ON PER  HARGE, IN INTERV	CFS, FO	RECORD 19	967-82  TED RECURD ANNUAL	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD	INTERVAL IN PERCEI	, IN VT	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, IN INTERV EXCEEDAN	CFS, FC	RECORD 19 DR INDICA (EARS, ANI ABILITY,	967-82 TED RECUFD ANNUAL IN PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASE DISCH	ARGE, IN INTERV	CFS, FC	DR INDICA EARS, ANI	967-82 TED RECUI D ANNUAL IN PERCEI	RRENCE
OISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC AL, IN Y ICE PROBA	RECORD 19 OR INDICA PEARS, ANI ABILITY, 25 4%	967-82 TED RECUID ANNUAL IN PERCEIT 50 2%	RRENCE NT 100 1%
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FC AL, IN Y ICE PROBA	RECORD 19 DR INDICA PEARS, ANI BILITY, 25 4% 63000	967-82 TED RECUID ANNUAL IN PERCEIT 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC AL, IN Y ICE PROBA 10%	RECORD 19 OR INDICA (EARS, ANI BILITY, 25 4% 63000 45500	967-82 TED RECUF D ANNUAL HN PERCET 50 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 44700 38200 33700	HARGE, IN INTERV EXCEEDAN 5 20% 56200 43900 37600	10 OF F	RECORD 19 REINDICA: (EARS, ANI (BILITY, 25 4% 63000 45500 38300	967-82 TED RECUF D ANNUAL IN PERCEF 50 2%	100 1%
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  44700 38200 33700 28500	HARGE, IN INTERVEXCEEDAN 50% 56200 43900 37600 33200	10 OF F	RECORD 19 OR INDICA: (FEARS, ANI ABILITY, 25 4\$ 63000 45500 38300 34700	967-82 TED RECUF D ANNUAL HN PERCET 50 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 44700 38200 28500 23300	HARGE, IN INTERVEXCEEDAN 5 20\$ 56200 43900 37600 33200 28600	10 CFS, FC AL, IN Y ICE PROBA-10% 60200 45000 38100 30500	RECORD 19 RECORD 19 RE INDICA (EARS, ANI BILLITY, 25 4\$ 63000 45500 38300 34700 31800	967-82 TED RECUF D ANNUAL IN PERCEF 50 2%	100 1%
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  44700 38200 33700 28500	HARGE, IN INTERVEXCEEDAN 50% 56200 43900 37600 33200	10 OF F	RECORD 19 OR INDICA: (FEARS, ANI ABILITY, 25 4\$ 63000 45500 38300 34700	967-82 TED RECUF D ANNUAL IN PERCEF 50 2%	100 1%
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 44700 38200 28500 23300	HARGE, IN INTERVEXCEEDAN 5 20\$ 56200 43900 37600 33200 28600	10 CFS, FC AL, IN Y ICE PROBA-10% 60200 45000 38100 30500	RECORD 19 RECORD 19 RE INDICA (EARS, ANI BILLITY, 25 4\$ 63000 45500 38300 34700 31800	TED RECUED ANNUAL IN PERCENSES	100 13
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA	OD OF RECOME	CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  44700 38200 33700 28500 23300 19100 0F RECC	HARGE, IN INTERVEXCEEDAN 5020\$ 56200 43900 337600 33200 28600 23900 21000 DRD 1967-	10 CFS, FC AL, IN Y 10 CE PROBA-10 10 10 10 10 10 10 10 10 10 10 10 10 1	RECORD 19 OR INDICA FEARS, ANI BILITY,  25 4\$ 63000 45500 38300 34700 31800 27100 24000	TED RECUED ANNUAL IN PERCENSES	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI- L EXCEEDA 5 20%	OD OF RE  CATED RE  NCE PROE  10  10%  DURATIO	CORD COURRENCE SABILITY, 25 4% IN TABLE CFS, WHI	INTERVAL IN PERCEI 50 2%  OF DAILY I	JALED OR	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	BASE  DISCH  2 50%  44700 38200 33700 28500 23300 19100 16800  OF RECC	5 20% 56200 43900 337600 23900 21000  DRD 1967-	10 10%  60200 45000 38100 334200 25700 22700 82	RECORD 19 RECORD	TED RECUI D ANNUAL IN PERCEI	100 1\$
1.25 80% WEIGHTED	BASE IN CFS, ND ANNUA 2 50% SKEW =	FOR INDI- L EXCEEDA	OD OF RECOME	CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%  OF DAILY I	JALED OR	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  44700 38200 33700 28500 23300 19100 0F RECC	HARGE, IN INTERVEXCEEDAN 5020\$ 56200 43900 337600 33200 28600 23900 21000 DRD 1967-	10 CFS, FC AL, IN Y 10 CE PROBA-10 10 10 10 10 10 10 10 10 10 10 10 10 1	RECORD 19 OR INDICA FEARS, ANI BILITY,  25 4\$ 63000 45500 38300 34700 31800 27100 24000	TED RECUED ANNUAL IN PERCENSES	100 1%

#### 14189500 LUCKIAMUTE RIVER NEAR HOSKINS. OR

LOCATION.--Lat 44°43'10", long 123°30'10", in NEL sec.11, T.10 S., R.7 W., Benton County, Hydrologic Unit 17090003, on right bank 0.2 mi downstream from Benton County Line, 3.5 mi northwest of Hoskins, and at mile 43.2.

DRAINAGE AREA. -- 34.3 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1934 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 378.7 ft National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Logponds upstream cause diurnal fluctuation at times. Minor diversion above station by pumping for irrigation.

AVERAGE DISCHARGE.--44 years, 209 ft<sup>3</sup>/s, 82.75 in/yr, 151,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft<sup>3</sup>/s Dec. 14, 1946, Feb. 17, 1949; maximum gage height, 13.22 ft Dec. 14, 1946; minimum discharge, 4.0 ft<sup>3</sup>/s Sept. 5-8, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 6, 1933, reached a stage of about 13.8 ft, from information by local residents.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1935-78 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	<b>V</b> -
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	7.7	402	70	78	1.11	2.8	1	9.3	7.3	6.4	5.8	5.1	4.7
NOVEMBER	10	811	294	203	.69	11.7	3	9.5	7.6	6.7	6.1	5.4	5.0
DECEMBER	46	980	475	222	. 47	18.9	7	9.7	7.8	7.0	6.4	5.7	5.4
JANUARY	65	1112	487	242	• 50	19.4	14	10	8.3	7.4	6.8	6.1	5.8
FEBRUARY	109	856	432	177	-41	17.2	30	11	9.1	8.3	7.7	7.0	6.7
MARCH	84	624	341	138	•40	13.6	60	13	11	9.5	8.7	7.9	7.4
\PRIL	67	492	200	93	.47	7.9	90	15	12	11	9.7	8.7	8.
MAY JUNE	33 27	220 168	107 51	49 25	.46 .48	4.3 2.0	120 183	19 37	15 27	13 23	11 20	10 17	9.3 15
JULY	15	56	25	8.1	.33	1.0	100	<i>)</i> /	Z/	23	20	17	را
AUGUST	8.1	31	15	4.6	.30	•6							
SEPTEMBER		87	19	15	.77	•8							
ANNUAL	80	334	209	50	.24	100							
MAGNI		PROBABILI D ON PERI				FLOW	MAG	NITUDE AI BASED		BILITY OF OD OF REC			)W
) I SCHARGE		FOR INDI					PERIOD (CON-		INTERVA	CFS, FOR L, IN YEA E PROBABI	RS, AND	ANNUAL	
	2		10		50		SECU-						

YEARS, A				OBABILIT		RCENT	PERIOD (CON-				EARS, AN	ID ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
2260	3010	4000	4630	5410	5980	6540							
							1	2280	2970	3420	3990	4410	4840
WEIGHTED	SKEW =	038					3	1750	2230	2570	3010	3360	3710
							7	1300	1630	1840	2090	2270	2450
							15	967	1190	1320	1460	1560	1640
							30	735	906	995	1090	1140	1190
							60	581	717	789	862	908	948
							90	526	645	701	753	783	807

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-78

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
816	542	407	323	260	214	144	<b>8</b> 9	54	31	25	20	16	13	11

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### 14190000 LUCKIAMUTE RIVER AT PEDEE, OR

LOCATION.--Lat 44°44'35", long 123°25'25", in SE¼ sec.33, T.9 S., R.6 W., Polk County, Hydrologic Unit 17090003, on left bank 0.5 mi downstream from Pedee Creek, 1.0 ml southwest of Pedee, and at mile 29.7.

DRAINAGE AREA. -- 115 mi2.

PERIOD OF RECORD. -- October 1940 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 245.47 ft National Geodetic Vertical Datum of 1929. Prior to July 1, 1949, nonrecording gage at site 1,700 ft downstream at datum 1.85 ft lower.

REMARKS.--Some diurnal fluctuation at low flow caused by logponds above station. Several small diversions for irrigation above station.

AVERAGE DISCHARGE. -- 30 years, 458 ft<sup>3</sup>/s, 331,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.09 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s; minimum, 7.0 ft<sup>3</sup>/s Sept. 12, 1944, Aug. 25, 30, 1967.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-70 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-70

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEARS CE PROBABI	, AND AN	NUAL NO	<b>V</b> -
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	14	729	131	152	1.16	2.4	1	13	10	8.8	7.9	6.9	
NOVEMBER	32	1332	571	388	.68	10.3	3	14	11	9.7	8.7	7.6	
DECEMBER	233	2415	1037	540	.52	18.8	7	16	12	11	9.4.	8.3	
JANUARY	265	2280	1143	582	.51	20.7	14	17	13	11	10	8.7	
FEBRUARY	304	2397	1057	452	.43	19.1	30	19	15	12	11	9.4	
MARCH	189	1377	735	315	.43	13.3	60	23	17	15	13	11	
APRIL	162	1021	424	205	.48	7.7	90	28	20	17	14	12	
MAY	103	504	233	113	.48	4.2	120	36	26	22	19	16	
JUNE	50	191	100	34	. 34	1.8	183	76	54	45	37	30	
JULY	23	66	44	12	. 27	.8							
AUGUST	11	43	25	8.4	.34	.5							
SEPTEMBER	11	105	30	22	.73	•5							
ANNUAL	238	714	458	103	.22	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-70

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-70

DISCHARGE, YEARS, A					CE INTER		PERIOD (CON-		INTERV	'AL, ÎN Y	EARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%
4780	6300	8640	10400	12700	14600								
							1	4770	6400	7740	9730	11500	
WEIGHTED	SKEW =	.462					3	3820	5040	6040	7520	8800	
							7	2930	3830	4450	5280	5930	
							15	2190	2830	3220	3670	3990	
							30	1680	2130	2360	2590	2730	
							60	1300	1660	1860	2080	2230	
							90	1180	1490	1660	1830	1940	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-70

		DISCH	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60 <b>%</b>	70 <b>%</b>	75%	80%	85%	9 <b>0%</b>	95%
1810	1220	885	692	557	451	306	192	112	62	46	34	27	22	17

#### 14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

LOCATION.--Lat 44°47'00", long 123°14'00", in SW&SW& sec.18, T.9 S., R.4 W., Polk County, Hydrologic Unit 17090003, on right bank 10 ft upstream from highway bridge at Helmick State Park, 3.0 mi northwest of Suver, 4.7 mi downstream from Little Luckiamute River, and at mile 13.5.

DRAINAGE AREA .-- 240 mi2.

3750

2460

1790 1380

1080

875

577

350

195

107

80

61

47

37

28

PERIOD OF RECORD.--August 1905 to October 1911, July 1940 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 171.92 ft National Geodetic Vertical Datum of 1929. Aug. 18, 1905, to Oct. 31, 1911, nonrecording gage at present site at different datum, Aug. 20 to Oct. 15, 1940, nonrecording gage at present site and datum.

REMARKS.--Some diurnal fluctuation during periods of low flow caused by millpond above station. A few small diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years, 910 ft<sup>3</sup>/s, 51.49 in/yr, 659,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 34.52 ft; minimum, 0.65 ft<sup>3</sup>/s Aug. 13, 1966.

#### STATISTICAL SUMMARIES

											05 411111		OW
МС	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1906-82		МА				RECORD 1	AL LOW FL 1907-82	
	MINIMUM	MAXIMUM	MC AN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL N	NON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	20	1241	197	218	1.11	1.8	1	26	16	11	7.5		
NOVEMBER	57	4574	1094	906	.83	10.0	3	27	17	12	8.5		
DECEMBER	106	5112	2171	1148	•53	19.8	7	28	18	13	9.8		
JANUARY	151	4727	2345	1156	. 49	21.4	14	30	20	15	12	8.7	
FEBRUARY	253	4769	2065	926	• 45	18.8	30	33	22	17	14	10	8.0
MARCH	391	3002	1458	684	. 47	13.3	60	40	28	23	19	15	13
APRIL MAY	312 190	1847	858	414	.48	7.8 3.8	90	47	34 43	28 36	24 31	20 26	17 23
JUNE	79	1026 492	421 190	191 83	.45 .44	1.7	120 183	61 129	93	77	65	26 54	47
JULY	30	184	77	31	.40	.7	100	129	9)				41
AUGUST	9.5	85	42	18	.42	.4							
			56	34	.61	.5							
SEPTEMBER	17	191	70	74	• • • •								
ANNUAL	230 TUDE AND	1464 PROBABIL	910 ITY OF IN	249 	.27 EOUS PEAK	100	 MA				OF ANNUA		
MAGNIT DISCHARGE, YEARS,	230 FUDE AND BASE , IN CFS,	PROBABIL D ON PER FOR INDI	910 ITY OF IN IOD OF RE	249  NSTANTANE ECORD 190  ECURRENCE BABILITY	.27 EOUS PEAK   06-82 E INTERVAL	100 FLOW , IN	PERIOD (CON-	BASE	ED ON PER HARGE, IN	N CFS, FO	OF ANNUA RECORD 1 OR INDICA YEARS, AN	1906-82 ATED RECUND ANNUAL	JRRENCE
MAGNIT	230  TUDE AND BASE	1464 PROBABIL D ON PER	910 ITY OF IN IOD OF RE	249  NSTANTANE CORD 190  CURRENCE	.27 EOUS PEAK   06-82 E INTERVAL	100  FLOW , IN	PERIOD	BASE	ED ON PER HARGE, IN	N CFS, FO	RECORD 1	1906-82 ATED RECUND ANNUAL	JRRENCE
MAGNIT	230  FUDE AND BASE  , IN CFS, AND ANNUA	PROBABIL D ON PER FOR INDIAL EXCEED.	910 ITY OF IN IOD OF RE	249  NSTANTANE ECORD 190  ECURRENCE BABILITY	.27 EOUS PEAK 1 106-82 E INTERVAL , IN PERCE	100 FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	ED ON PER HARGE, IN INTER' EXCEEDAN	N CFS, FO	RECORD 1	1906-82 ATED RECUND ANNUAL	JRRENCE ENT
MAGNIT	230 FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABIL D ON PER FOR IND AL EXCEED.	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI	249  NSTANTANE ECORD 190  ECURRENCE BABILITY  25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTER EXCEEDAN 5 20%	N CFS, FO VAL, IN NCE PROB 10	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%	ATED RECUND ANNUAL IN PERCE	JRRENCE ENT 100 1%
MAGNITUDISCHARGE, YEARS, A	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND AL EXCEED. 5 20%	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI	249  NSTANTANE ECORD 190  ECURRENCE BABILITY  25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTER EXCEEDAN 5 20%	N CFS, FOVAL, IN NCE PROB.	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  21900	ATED RECUND ANNUAL IN PERCENTED SO 2%	URRENCE ENT 100 1% 27700
MAGNITUDISCHARGE, YEARS, 7	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND AL EXCEED.	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI	249  NSTANTANE ECORD 190  ECURRENCE BABILITY  25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO VAL, IN NCE PROB. 10, 10%	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4% 21900 16500	1906-82 ATED RECU IN PERCU 50 2% 24800 18500	JRRENCE ENT 100 1% 27700 20600
MAGNITUDISCHARGE, YEARS, A	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND AL EXCEED. 5 20%	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI	249  NSTANTANE ECORD 190  ECURRENCE BABILITY  25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERNEXCEEDAN 5 20% 15000 11600 8560	N CFS, FG VAL, IN NCE PROB 10 10% 18000 13700 9770	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4% 21900 16500 11100	1906-82 ATED RECUND ANNUAL IN PERCU 50 2% 24800 18500 12000	JRRENCE 
MAGNITUDISCHARGE, YEARS, A	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND AL EXCEED. 5 20%	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI	249  NSTANTANE ECORD 190  ECURRENCE BABILITY  25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15	DISCH 2 50% 10400 8360 6470 4690	HARGE, IN INTER EXCEEDAN 5 20% 11600 8560 5990	N CFS, FF VAL, IN NCE PROB 10 10% 18000 13700 9770 6680	PRECORD 1 PRECOR	ATED RECUND ANNUAL IN PERCENT SO 2% 24800 18500 12000 7850	27700 20600 12900 8240
MAGNITUMA	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND AL EXCEED. 5 20%	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI	249  NSTANTANE ECORD 190  ECURRENCE BABILITY  25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCH 2 50% 10400 8360 6470 4690 3500	HARGE, IN INTER EXCEEDAN 5 20% 15000 11600 8560 5990 4410	N CFS, FI VAL, IN NCE PROB 10 10% 18000 13700 9770 6680 4850	OR INDICA YEARS, AN ABILITY, 25 4% 21900 16500 11100 7400 5280	1906-82  ATED RECU ND ANNUAL IN PERCE 50 2%  24800 18500 12000 7850 5530	URRENCE  100 1,5  27700 20600 12900 12900 8240 5730
MAGNITUDISCHARGE, YEARS, A	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND AL EXCEED. 5 20%	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI	249  NSTANTANE ECORD 190  ECURRENCE BABILITY  25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15	DISCH 2 50% 10400 8360 6470 4690	HARGE, IN INTER EXCEEDAN 5 20% 11600 8560 5990	N CFS, FF VAL, IN NCE PROB 10 10% 18000 13700 9770 6680	PRECORD 1 PRECOR	ATED RECUND ANNUAL IN PERCENT SO 2% 24800 18500 12000 7850	27700 20600 12900 8240
MAGNITUDISCHARGE, YEARS, A	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND AL EXCEED. 5 20%	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI 10 10 21600 2	249  ISTANTANE CORD 190  ECURRENCE BABILITY 25 4%	.27 EOUS PEAK   106-82 E INTERVAL , IN PERCE 50 2%	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 2 50% 10400 8360 6470 4690 3500 2760 2460	15000 11600 85990 4410 3070	18000 13700 9770 6680 4850 33330	25 4% 21900 16500 11100 7400 5280 4150	1906-82  ATED RECUND ANNUAL IN PERCUMPANNUAL 1N PERCUMPANNUAL 2%  24800 18500 12000 7850 5530 4340	27700 20600 12900 8240 5730 4490
MAGNITUMA	230  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL D ON PER FOR IND L EXCEED. 5 20%	910 ITY OF IN IOD OF RE ICATED RE ANCE PROI 10 10 21600 2	249  ISTANTANE CORD 190  CCURRENCE 3ABILITY 25 4%  27000 3	.27 EOUS PEAK   106-82 E INTERVAL   1 IN PERCE   50   2%  S1300   35	100 FLOW , IN NT 100 1% 700	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	DISCH 2 50% 10400 8360 6470 4690 3500 2760 2460	15000 15000 15000 15000 15000 1600 15000 1	N CFS, FIVAL, IN NCE PROB.  10 10%  18000 13700 9770 6680 4850 3830 33330 822	21900 11100 7400 5280 4150 3550	1906-82  ATED RECUND ANNUAL IN PERCUMPANNUAL 1N PERCUMPANNUAL 2%  24800 18500 12000 7850 5530 4340	27700 20600 12900 8240 5730 4490

#### 14190700 RICKREALL CREEK NEAR DALLAS, OR

LOCATION.--Lat 44°54'55", long 123°23'02", in SW\set sec.35, T.7 S., R.6 W., Polk County, Hydrologic Unit 17090007, on left bank 1.8 mi downstream from Canyon Creek, 3.5 mi west of Dallas, 5.1 mi downstream from Aaron Mercer Reservoir, and at mile 19.1.

DRAINAGE AREA .-- 27.4 mi2.

622

392

286

214

165

138

88

47

23

PERIOD OF RECORD. -- August 1957 to September 1978.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 460 ft, from topographic map.

REMARKS.--Low flow regulated since June 1960 by Aaron Mercer Reservoir, usable capacity, 2,010 acre-ft. Diversion for city of Dallas municipal supply from four tributaries and Rickreall Creek above station.

COOPERATION. -- Records of diversion, monthend elevations of reservoir, and reservoir capacity curve furnished by city of Dallas.

AVERAGE DISCHARGE.--21 years (water years 1958-78), 148 ft³/s, 73.35 in/yr, 107,200 acre-ft/yr, adjusted for diversion and storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,160 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 8.78 ft; no flow at times.

#### STATISTICAL SUMMARIES

	MINIMUM	MAX I MUM	 MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL,	IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	)N-
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	3.2	81	29	26	.90	1.6	1	1.9	.6	.2	.1		
IOVEMBER	20	638	210	155	.74	12.0	3	2.2	.9	.5	.3		
ECEMBER	9.6	773	378	190	.50	21.5	7	2.4	1.4	1.0	.8		
ANUARY	13	685	397	197	.50	22.6	14	2.7	1.6	1.2	•9		
EBRUARY	60	590	273	150	.55	15.5	30	3.2	2.0	1.5			
ARCH	72	432	249	121	. 49	14.2	60	4.2	2.6	2.0			
PRIL	52	252	119	60	.50	6.8	90	4.9	3.3	2.6			
AY	25	139	61	32	.53	3.5	120	6.4	4.4	3.5			
UNE	8.5	64	22	12	.54	1.2	183	16	11	8.6	7.3		
ULY	3.5	15	7.5	2.9	.39	.4				0.0	,., 		
UGUST	1.0	11	4.8	2.6	.54	.3							
EPTEMBER	1.8	15	6.6	3.9	.59	.4							
EFICMOER	1.0	כו	0.0	3.9	• 29	•4							
NNUAL	39	255	146	43	.30	100							
MAGNIT		PROBABILI D ON PERI	TY OF INS	STANTANE	OUS PEAK I		 MAC				OF ANNUAL ECORD 19		 .ow
ISCHARGE,	BASE IN CFS,		TY OF INS	STANTANE( CORD CURRENCE	INTERVAL	FLOW	MAC	BASEI DISCH/	O ON PERI	OD OF RI		61-78 ED RECUR ANNUAL	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU-	BASEI DISCHA	O ON PERI ARGE, IN INTERVA	OD OF RI	ECORD 19 R INDICAT EARS, AND BILITY, I	61-78  ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW , 1N NT	PERIOD (CON- SECU- TIVE	BASEI DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANC	CFS, FOILL, IN Y	ECORD 19 R INDICAT EARS, AND BILITY, I	61-78  ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU-	BASEI DISCHA	O ON PERI ARGE, IN INTERVA	OD OF RI	ECORD 19 R INDICAT EARS, AND BILITY, I	61-78  ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE	BASEI DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANC	CFS, FOILL, IN Y	ECORD 19 R INDICAT EARS, AND BILITY, I	61-78  ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE	BASEI DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANC	CFS, FOILL, IN Y	ECORD 19 R INDICAT EARS, AND BILITY, I	61-78  ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH/	O ON PERI ARGE, IN INTERVA EXCEEDANC	CFS, FOIL, IN YE PROBAL	ECORD 19 R INDICAT EARS, AND BILITY, 1	61-78  ED RECUF ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH/	O ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF RICES, FOILL, IN YE PROBAL	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 4760	61-78  ED RECUF ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 2380 1690	O ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF RI CFS, FOI L, IN Y E PROBAI 10% 4040 2750	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 4760 3230	ED RECUF ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH/ 2 50% 2380 1690 1180	5 20% 3420 2340 1020	OD OF RI CFS, FOI LL, IN Y E PROBAI 10 10% 4040 2750 1770 1120	ECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4760 3230 2000 1220	61-78  ED RECUF ANNUAL N PERCEN  50 2%	RENCE
1scharge, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 2380 1690 1180 822 605	3420 2340 1560 1020 717	OD OF RICES, FOILL, IN Y E PROBAL 10 10% 4040 2750 1770 1120 759	R INDICAT EARS, AND BILITY, I 25 4% 4760 3230 2000 1220 792	61-78  ED RECUF ANNUAL N PERCEN  50 2%	RENCE
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 2380 1690 1180 822	5 20% 3420 2340 1020	OD OF RI CFS, FOI LL, IN Y E PROBAI 10 10% 4040 2750 1770 1120	ECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4760 3230 2000 1220	61-78  ED RECUF ANNUAL N PERCEN 50 2%	RENCE
1scharge, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF INS	STANTANEC CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 	DI SCH/ E 2 50% 2380 1690 1180 822 605 475 411	3420 2340 1020 717 575 499	OD OF RICES, FOILL, IN YE PROBAL  10 10 2750 1770 1120 759 610 528	ECORD 19  R INDICAT EARS, AND BILITY, 1  25 4%  4760 3230 2000 1220 792 635	61-78  ED RECUF ANNUAL N PERCEN 50 2%	RENCE
1scharge, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIVIDUAL EXCEEDA	TY OF INSOD OF REC	STANTANEC CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	FLOW  TOO  THE STATE OF THE STA	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 100 SCH/ 2 50% 2380 1690 1180 822 605 475 411	3420 2340 1560 1020 717 575 499	OD OF RICES, FOILL, IN YEE PROBAL  10 10 2750 1770 1120 759 610 528	### ATT   PROPERTY   P	61-78  ED RECUF ANNUAL N PERCEN 50 2%	RENCE

12

8.7

6.7

5.3

4.0

2.6

### 14191000 WILLAMETTE RIVER AT SALEM. OR

LOCATION.--Lat 44°56'40", long 123°02'30", in SE±SW± sec. 22, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on right bank 300 ft upstream from Center Street Bridge in Salem, and at mile 84.16.

DRAINAGE AREA.--7,280 mi<sup>2</sup>, approximatley.

PERIOD OF RECORD.--October 1909 to December 1916, January 1923 to September 1982. Monthly discharge only January 1923 to September 1927, published in WSP 1318. Gage-height records collected at about the same site since 1892 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 106.14 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1909, to Dec. 31, 1916, nonrecording gage at site 0.5 mi upstream at datum 8.00 ft higher. Jan. 1, 1923, to Nov. 26, 1934, nonrecording gage at center Street Bridge at datum 8.00 ft higher. Nov. 27, 1934, to Sept. 30, 1962, water-stage recorder at present site at datum 8.00 ft

REMARKS.---Flow regulated by 12 reservoirs above station. Many small diversions for irrigation above station; part of flow of Salem Canal, which diverts water from North Santiam River, returns to Willamette River below station, through Mill Creek at Salem.

AVERAGE DISCHARGE.--66 years, 23,560  $ft^3/s$ , 43.95 in/yr, 17,070,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft3/s Jan. 8, 1923, gage height, 38.3 ft, present datum; minimum, 2,470 ft<sup>3</sup>/s Aug. 27, 1940, gage height, 3.55 ft, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft<sup>3</sup>/s Dec. 4, 1861, gage height, about 47 ft present datum, from rating curve extended above 250,000 ft<sup>3</sup>/s in 1916. Floods of Jan. 16, 1881, and Feb. 5, 1890, reached stages of 44.3 ft, discharge, 428,000 ft<sup>3</sup>/s, and 45.1 ft, discharge, 448,000 ft<sup>3</sup>/s, respectively, from floodmerks and information by Corps of Engineers.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF 12 UPSTREAM DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1910-41

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1911-41

				STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON-		INTERVAL	, IN YEA	RS, AND	TED RECUI ANNUAL NO IN PERCEI	-AC
МОМТН	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 <b>20%</b>	10 10%	20 5%	50 <b>2%</b>	100
CTOBER	3214	14650	6236	3025	.49	2.4	1	3260	2870	2700	2560	2420	
IOVEMBER	3140	68550	24280	18580	.77	9.4	3	3280	2900	2720	2580	2430	
DECEMBER	10020	63550	31580	14790	.47	12.2	7	3310	2920	2740	2600	2460	
JANUARY	10820	97720	43070	21480	.50	16.7	14	3360	2950	2770	2630	2480	
EBRUARY	14580	87540	40860	20150	. 49	15.8	30	3460	3010	2820	2680	2530	
MARCH	11110	71490	33840	15600	.46	13.1	60	3630	3080	2880	2760	2640	
APRIL	107 <del>9</del> 0	63410	28360	13040	<b>. 4</b> 6	11.0	90	3 <del>9</del> 80	3280	3010	2820	2650	
YAY	9 <b>708</b>	33460	20280	7259	•36	7.9	120	4410	3530	3210	2990	2790	
IUNE	5065	37360	13990	7655	•55	5.4	183	6920	5250	4620	4190	37 <b>9</b> 0	
JULY	3286	19870	6985	3745	.54	2.7							
AUGUST	<b>2</b> 653	7766	4131	1116	.27	1.6							
SEPTEMBER	<b>2</b> 68 <b>2</b>	9371	4455	1613	.36	1.7							
ANNUAL	13670	35220	21290	5668	.27	100							
OI SCHARGE ,	BASE , IN CFS,	D ON PERI	OD OF RE	CORD 191	OUS PEAK I 0-41 INTERVAL IN PERCEI	, IN	PERIOD (CON-	BASE DISCH	D ON PER	CFS, FO	ECORD 1	TED RECU	RRENCE
			10	25	50	100	SECU-					IN PERCEI	· · · · · · · · · · · · · · · · · · ·
1.25	2	5	10										
	2 50%	20%	10%	4%	2%	1%	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100

DISCHARGE YEARS,	•	S, FOR I					PERIOD (CON-	DISC	INTER	VAL, IN	YEARS, A	ATED RECU ND ANNUAL IN PERCE	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 <b>2%</b>	100 1%
109000	153000	216000	258000	314000	356000								
							1	145000	202000	239000	286000	320000	
WE I GHT	ED SKEW	= .038					3	135000	182000	211000	247000	272000	
							7	110000	143000	161000	182000	197000	
							15	81700	104000	117000	132000	142000	
							30	62600	77300	85200	93500	98800	
							60	49100	60400	67000	74700	79900	
							90	43500	52700	57900	63600	67400	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1910-41

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATE	D PERCEN	T OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
67500	47800	37400	31800	27700	24400	19300	14300	9580	6160	5110	4360	3850	3500	3140

### 14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

#### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF 12 UPSTREAM DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1969-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICATION OF THE STATE OF T		ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5 <b>%</b>	50 <b>2%</b>	100 1%
OCTOBER	10950	24390	14470	3464	,24	4.9	1	6280	5490	5000	4580		
NOVEMBER	12240	70400	29040	16440	.57	9.8	3	6340	5540	5050	4620		
DECEMBER	6780	91810	55450	24340	.44	18.7	7	6430	5630	5160	4740		
JANUARY	6377	78420	52460	22620	.43	17.7	14	6530	5730	5260	4850		
FEBRUARY	5313	60290	34660	16320	.47	11.7	30	6650	5890	5470	5120		
MARCH	11550	73670	29940	17330	.58	10.1	60	7060	6260	5910	5660		
APRIL	10260	38740	23250	8934	.38	7.8	90	7770	6750	6290	5940		
MAY	7701	25220	18240	5390	.30	6.2	120	8800	7620	7080	6670		
JUNE	6539	21990	13100	5048	.39	4.4	183	10800	9230	8490	7930		
JULY	6018	10610	7619	1423	. 19	2.6							
AUGUST	6445	9540	7630	944	.12	2.6							
SEPTEMBER		13340	10670	1523	.14	3.6							
ANNUAL	9792	37960	24690	7669	.31	100							
DISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	OUS PEAK I	, IN	*	BAS	ED ON PE	RIOD OF N CFS, F	OF ANNUA RECORD 1 OR INDICA	969-82 TED RECU	
OISCHARGE, YEARS, A	BASE IN CFS,	D ON PERI	OD OF RE	CORD CURRENCE	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BAS	HARGE, I	RIOD OF  N CFS, F VAL, IN	RECORD 1	969-82 TED RECUID ANNUAL	RRENCE
OISCHARGE,	BASE IN CFS,	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD	INTERVAL IN PERCEI	, IN	PERIOD (CON-	BAS	HARGE, I	RIOD OF  N CFS, F VAL, IN	RECORD 1  OR INDICA YEARS, AN	969-82 TED RECUID ANNUAL	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	DISC	HARGE, III INTER EXCEEDA	N CFS, F VAL, IN NCE PROB	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4%	969-82 TED RECUID ANNUAL IN PERCE	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC 2 50%	HARGE, II INTER EXCEEDA	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  182000	969-82  TED RECUID ANNUAL IN PERCEI  50 2%	100 1%
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC 2 50% 123000 118000	HARGE, II INTER EXCEEDAL  5 20%  159000 148000	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  182000 163000	969-82  TED RECU ID ANNUAL IN PERCE  50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC  2 50%  123000 118000 107000	ED ON PE HARGE, II INTER EXCEEDAL 5 20% 159000 148000 128000	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1	969-82  TED RECUID ANNUAL IN PERCE	100 1#
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC  2 50%  123000 118000 107000 91500	ED ON PEI HARGE, II INTER EXCEEDAI  5 20%  159000 148000 128000 108000	N CFS, F VAL, IN NCE PROB 10 172000 157000 132000 112000	RECORD 1	969-82  TED RECUID ANNUAL IN PERCE  50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC  2 50%  123000 118000 107000 91500 76300	HARGE, II INTER EXCEEDAI 5 20% 159000 148000 128000 108000 89800	N CFS, F VAL, IN NCE PROB  10 10 157000 132000 112000 92400	RECORD 1	969-82  TED RECUID ANNUAL IN PERCE	100 1#
PISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISC 2 50% 123000 118000 107000 91500 76300 62000	HARGE, II INTER EXCEDAI 5 20% 159000 148000 128000 108000 89800 77700	N CFS, F VAL, IN NCE PROB 10 10 157000 132000 112000 82200	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4\$  182000 163000 134000 113000 93500 84800	969-82  TED RECUID ANNUAL IN PERCE  50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC  2 50%  123000 118000 107000 91500 76300	HARGE, II INTER EXCEEDAI 5 20% 159000 148000 128000 108000 89800	N CFS, F VAL, IN NCE PROB  10 10 157000 132000 112000 92400	RECORD 1	969-82  TED RECUID ANNUAL IN PERCE	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISC  2 50%  123000 118000 107000 91500 76300 62000 53000	HARGE, II INTER EXCEEDAI  159000 148000 128000 89800 77700 68800	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4\$  182000 163000 134000 113000 93500 84800	969-82  TED RECUID ANNUAL IN PERCE	100 13
PISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RECOME OF THE OTAL OF THE OF RECOME OF THE OF THE OTAL OF THE OTAL OF THE OTAL O	CORD CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISC 2 50% 123000 118000 107000 91500 76300 62000 53000 0 OF REC	HARGE, II INTER EXCEEDAI  159000 148000 128000 108000 89800 77700 68800 0RD 1969	N CFS, F VAL, IN NCE PROB 10 10% 172000 157000 132000 112000 92400 82200 74900 -82	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  182000 163000 113000 93500 84800 79500	969-82  TED RECUID ANNUAL IN PERCE	100 1#
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RECOME OF THE OTAL OF THE OF RECOME OF THE OF THE OTAL OF THE OTAL OF THE OTAL O	CORD CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2% OF DAILY I	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISC 2 50% 123000 118000 107000 91500 76300 62000 53000 0 OF REC	HARGE, II INTER EXCEEDAI  159000 148000 128000 108000 89800 77700 68800 0RD 1969	N CFS, F VAL, IN NCE PROB 10 10% 172000 157000 132000 112000 92400 82200 74900 -82	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  182000 163000 113000 93500 84800 79500	969-82  TED RECUID ANNUAL IN PERCE	100 1%

#### 14192500 SOUTH YAMHILL RIVER NEAR WILLAMINA, OR

LOCATION.--Lat 45°02'50", long 123°30'10", in NE±SE± sec.14, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008, on left bank 2.3 mi southwest of Willamina, 2.8 mi upstream from Willamina Creek, and at mile 45.5.

DRAINAGE AREA .-- 133 mi2.

PERIOD OF RECORD. -- May 1934 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 235.55 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Slight regulation occasionally at low flows by millpond upstream. No diversion above station.

AVERAGE DISCHARGE.--48 years, 623 ft<sup>3</sup>/s, 63.61 in/yr, 451,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.07 ft; minimum, 2.6 ft<sup>3</sup>/s Oct. 11, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1935-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1936-82

	MINIMON	MANIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON-		ARGE, IN I INTERVAL, EXCEEDANCI	IN YEARS	, AND AN	INUAL NO	4-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	12	846	188	184	.98	2.5	1	12	8.4	6.8	5.6	4.5	3.9
NOVEMBER	22	2650	873	602	.69	11.6	3	13	9.0	7.3	6.1	5.0	4.3
DECEMBER	104	2917	1501	679	.45	20.0	7	14	9.7	7.9	6.7	5.4	4.
JANUARY	132	3172	1509	743	. 49	20.1	14	15	11	8.8	7.4	6.1	5.3
EBRUARY	278	2869	1344	554	.41	17.9	30	18	12	10	8.7	7.2	6.3
1ARCH	270	1981	998	415	.42	13.3	60	23	16	13	11 -	9.1	8.0
\PRIL	180	1365	<b>58</b> 6	276	. 47	7.8	90	28	19	16	13	11	9.7
MAY	69	613	276	131	.47	3.7	120	39	26	21	18	15	13
IUNE	55	405	125	75	•60	1.7	183	91	62	50	41	33	29
IULY	19	85	48	20	.42	• 6							
AUGUST	6.7	82	25	13	.52	.3							
SEPTEMBER	9.7	282	42	<b>4</b> 6	1.08	•6							
ANNUAL	215	1028	623	152	.24	100							
MAGNI		PROBABILI			OUS PEAK I	LOW	MAG		AND PROBAI				)W

YEARS,				RECURREN ROBABILIT			PERIOD (CON-		INTER	N CFS, FO	YEARS, A	AUNNA DA	Ļ
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100
7320	9570	12400	14100	16200	17600	19000							
							1	7420	9460	10700	12000	12900	13800
WE I GHTED	) SKEW =	136					3	5710	7230	8180	9310	10100	10900
							7	4250	5230	5760	6320	6690	7010
							15	3120	3810	4150	4500	4710	4890
							30	2360	2800	2980	3140	32 <b>2</b> 0	3280
							60	1820	2220	2420	2610	2730	2830
							90	1630	1980	2150	2300	2380	2450

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-82

			DISCHA	RGE, IN	CFS, WH	CH WAS	QUALED O	R EXCEED	ED FOR I	NDICATED	PERCENT	OF TIME			
5	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2500	) 17	10	1250	960	761	609	400	248	136	70	50	36	27	21	16

#### 14193000 WILLAMINA CREEK NEAR WILLAMINA, OR

LOCATION.--Lat 45°08'35", long 123°29'35", in NELNWL sec.13, T.5 S., R.7 W., Yamhill County, Hydrologic Unit 17090008, on right bank 4.5 mi north of Willamina and at mile 6.2.

DRAINAGE AREA .-- 64.7 mi2.

М

PERIOD OF RECORD. -- June 1934 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 315 ft National Geodetic Vertical Datum of 1929 (plane-table survey). Prior to Oct. 1, 1939, water-stage recorder at site on left bank at datum 1.00 ft higher. Oct. 1, 1939, to Aug. 5, 1968, water-stage recorder at site on left bank at present datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--48 years, 261 ft<sup>3</sup>/s, 54.78 in/yr, 189,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,800 ft $^3$ /s Dec. 22, 1964, gage height, 13.54 ft, from rating curve extended above 3,400 ft $^3$ /s on basis of slope-area measurement at gage height 11.65 ft; minimum, 5.4 ft $^3$ /s July 15, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 31, 1931, reached a stage of about 12 ft from information by local resident, discharge, 8,200 ft<sup>3</sup>/s from rating curve extended above 3,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 11.65 ft.

#### STATISTICAL SUMMARIES

MONTHLY	AND ANNUA	L MEAN DISCHARGES	1935-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
				BASED ON PERIOD OF RECORD 1936-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEARS CE PROBABI	, AND AN	NUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	12	276	64	59	.93	2.0	1	12	10	9.5	8.9	8.4	8.1
NOVEMBER	15	1084	310	238	.77	9.8	3	12	11	9.8	9.3	8.7	8.4
DECEMBER	35	1220	597	303	.51	19.0	7	13	11	10	9.5	8.9	8.5
JANUARY	43	1216	617	319	.52	19.6	14	14	12	11	10	9.5	9.1
FEBRUARY	86	1121	564	228	.40	17.9	30	15	13	12	11	10	10
MARCH	105	929	449	186	.41	14.3	60	17	14	13	12	11	11
APRIL	95	544	272	112	.41	8.6	90	20	16	15	13	12	12
MAY	54	296	135	52	.38	4.3	120	25	19	17	16	14	13
JUNE	39	160	66	25	.38	2.1	183	46	34	29	25	21	19
JULY	20	54	32	7.9	.25	1.0							
AUGUST	12	38	20	5.3	.27	.6							
SEPTEMBER	11	69	22	11	.51	.7							
ANNUAL	83	461	261	69	.27	100							

MAGNITUDE	AND PROBABILITY	0F	INSTANTANEOUS PEAK FL	OW
	BASED ON PERIOD	0F	RECORD 1935-82	

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1935-82

DISCHARGE, YEARS, AI		PERIOD (CON-	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY. IN PERCENT										
1.25 80%	2 50% 	5 20% 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
2850	3710	5020	5960	7250	8270	9360							
							1	2870	3830	4460	5230	5800	6370
WEIGHTED	SKEW =	.447					3	2200	2860	3300	3880	4310	4750
							7	1670	2100	2350	2630	2810	2990
							15	1270	1550	1690	1820	1890	1950
							30	957	1150	1230	1290	1330	1350
							60	741	923	1010	1110	1160	1210
							90	661	820	895	966	1010	1040

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80 <b>%</b>	85%	90%	95 <b>%</b>
986	666	513	407	332	274	183	114	67	39	30	24	21	17	14

## 14193300 MILL CREEK NEAR WILLAMINA, OR

LOCATION.--Lat 44°58'15", long 123°26'55", in NE‡NW‡ sec.17, T.7 S., R.6 W., Polk County, Hydrologic Unit 17090008, on left bank 0.2 mi upstream from bridge, 0.7 mi downstream from South Branch, 7.5 mi south of Willamina, and at mile 11.5.

DRAINAGE AREA. -- 27.4 mi2.

566

252

PERIOD OF RECORD. -- July 1958 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1959-73), 140  $ft^3/s$ , 69.39 in/yr, 101,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,170  $ft^3/s$  Dec. 22, 1964, gage height, 11.47 ft; minimum, 2.6  $ft^3/s$  Sept. 8, 1958.

## STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	R INDICATE RS, AND AI BILITY, II	NNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	6.7	94	40	30	.76	2.4	1	3.9	3.4	3.1	2.9		
NOVEMBER	80	385	194	103	.53	11.6	3	4.0	3.4	3.1	2.9		
DECEMBER	139	658	330	155	.47	19.7	7	4.1	3.5	3.3	3.1		
JANUARY	76	631	376	179	.48	22.4	14	4.3	3.7	3.4	3.2		
EBRUARY	83	572	269	145	.54	16.0	30	4.7	3.8	3.5	3.2.		
MARCH	67	418	241	104	.43	14.4	60	5.4	4.2	3.8	3.5		
APRIL	55	250	120	61	.51	7.2	90	6.6	4.9	4.3	4.0		
YAM	24	129	58	31	.52	3.5	120	8.6	6.3	5.4	4.9		
JUNE	12	69	24	14	.58	1.4	183	21	15	12	10		
JULY	6.6	13	9.3	2.1	.22	•6							
AUGUST	3.9	17	6.2	3.3		.4							
SEPTEMBER	3.4	43	11	10	.95	•7							
ANNUAL	90	183	140	23	.16	100							
MA GN I		PROBABILI D ON PERIO				FLOW	MAC				OF ANNUAL ECORD 195		.OW
OISCHARGE,	BASE IN CFS,	FOR INDIC	OD OF REC	ORD 195	9-73  INTERVAL	, IN	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RECEIVED		59-73 ED RECUF ANNUAL	RENCE
DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF REC	ORD 195	9-73 INTERVAL IN PERCE	, IN	PERIOD (CON- SECU- TIVE	BASED DISCHA	RGE, IN INTERVA	OD OF RECEIVED	ECORD 195 R INDICATE EARS, AND BILITY, IN	59-73 ED RECUF ANNUAL N PERCEN 50	RRENCE
1.25	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO	CATED REC NCE PROBA	CORD 1950 CURRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF RECEIVED	ECORD 195  R INDICATE EARS, AND BILITY, IN	59-73 ED RECUF ANNUAL N PERCEN	RRENCE
OISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA	D ON PERIO	CATED REC NCE PROBA	URRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E2 50%	ON PERI	OD OF RECEIVED	ECORD 19! R INDICATE EARS, AND BILITY, II	59-73 ED RECUF ANNUAL N PERCEN 50	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	FOR INDII L EXCEEDA	CATED REC NCE PROBA	CORD 1950 CURRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	ON PERI	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, II  25 4%	59-73 ED RECUF ANNUAL N PERCEN 50 2%	100
YEARS, / YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	D ON PERIO	CATED REC NCE PROBA	CORD 1950 CURRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  2130 1540	ON PERI	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF	25 4310 2920	ED RECUF ANNUAL N PERCEN 50 2%	100 13
1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	FOR INDII L EXCEEDA	CATED REC NCE PROBA	CORD 1950 CURRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  2 50%  2130 1540 1060	ON PERI	OD OF RECEIVED OF	25 A 310 2920 1790	ED RECUF ANNUAL N PERCEN 50 2%	100 13
1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	FOR INDII L EXCEEDA	CATED REC NCE PROBA	CORD 1950 CURRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  2130 1540	ON PERI	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF	25 4310 2920	59-73 ED RECUP ANNUAL N PERCEN 50 2%	100 13
1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	FOR INDII L EXCEEDA	CATED REC NCE PROBA	CORD 1950 CURRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50\$  2130 1060 774 561	ON PERI INTERVA EXCEEDANC 5 20% 2920 2010 1320 933 640	OD OF RECOMPANY OF	R INDICATE EARS, AND BILITY, IF 4% 4310 2920 1790 1130 714	ED RECUF ANNUAL N PERCEN 50 2%	100 13
1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	FOR INDII L EXCEEDA	CATED REC NCE PROBA	CORD 1950 CURRENCE BILITY,	9-73 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  2130 1540 1060 774	ON PERI IRGE, IN INTERVA EXCEEDANC 5 20% 2920 2010 1320 933	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, II  25  4310 2920 1790 1130	59-73 ED RECUF ANNUAL N PERCEN 50 2%	IT
1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	FOR INDII L EXCEEDA	CATED RECONCE PROBA	URRENCE BILITY,	9-73 INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50\$  2130 1540 1060 774 561 429 369	2920 2010 2013 2033 2040 2010 2010 2010 2010 2010 2010 2010	OD OF RECOME A STATE OF THE PROBABLE OF THE PR	25 4% 4310 2920 1790 1130 714 590	59-73 ED RECUF ANNUAL N PERCEN 50 2%	RENCE IT 100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50% 3060	FOR INDIG	CATED RECONCE PROBA  10 10 4790 5	URRENCE BILITY, 25 4%	9-73 INTERVAL IN PERCE 50 2%	, IN NT 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  2130 1060 774 561 429 369  OF RECOR	2920 2010 1320 933 640 500 1959-7	OD OF RECEIVED OF	R INDICATE EARS, AND BILLITY, II  25  43  4310 2920 1790 1130 714 590 482	59-73 ED RECUF ANNUAL N PERCEN 50 2%	RENCE

195 155 125 80 50 29 16 11 8.0 6.3 5.2 4.3

107

## 14194000 SOUTH YAMHILL RIVER NEAR WHITESON, OR

LOCATION.--Lat 45°10'08", long 123°12'25", in NEtNWt sec.5, T.5 S., R.4 W., Yamhill County, Hydrologic Unit 17090008, near left bank on downstream side of Whiteson Bridge on State Highway 99W, 1.3 mi northwest of Whiteson, 1.4 mi downstream from Salt Creek, and at mile 16.71.

DRAINAGE AREA. -- 502 mi2.

7620

4960

3580

2710

2080

1650

1050

617

321

77

30

PERIOD OF RECORD. -- July 1940 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 82.30 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1940, nonrecording gage at present site and datum.

REMARKS.--Slight regulation during low-water periods by logpond upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 1,768 ft<sup>3</sup>/s, 47.83 in/yr, 1,281,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 47.20 ft; minimum, 3.2 ft<sup>3</sup>/s Aug. 24,

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 46.9 ft, from Oregon State Highway Department bridge plans.

	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1941-82		МА		AND PROB ED ON PER		OF ANNUA RECORD 1	L LOW FL 942-82	OW
				STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	DISC	INTERVAL	., IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	23	1819	383	392	1.02	1.8	1	24	15	10	7.7		
NOVEMBER	105	8085	2073	1639	•79	9.7	3	25	16	12	8.8	6.2	4.9
DECEMBER	188	8493	4346	2183	.50	20.4	7	28	17	13	9.9	7.1	5.6
JANUARY	242	8884	4621	2462	.53	21.7	14	31	20	15	12	8.4	6.6
FEBRUARY	423	8890	4035	1854	.46	18.9	30	36	24	18	15	11	9.4
MARCH	699	6238	2921	1401	.48	13.7	60	46	31	25	20	16	14
APRIL	545	3623	1681	860	.51	7.9	90	60	39	31	26	21	18
MAY	269	1736	727	374	.51	3.4	120	85	56	45	38	31	27
JUNE	121	910	295	159	.54	1.4	183	215	145	116	95	75	6 <b>4</b>
JULY	38	200	104	43	.41	.5	כסו	215	145	110	97	, ,	
AUGUST	9.7												
SEPTEMBER		153 450	50 85	26	.51 .95	.2							
SEPTEMBER	18	450	85	81	.95	.4							
ANNUAL	461	3119	1768	519	•29	100							
DI SCHARGE YEARS	, IN CFS,				INTERVAL						RECORD 1	J41 0L	
					IN PERCE	NT 	PERIOD (CON-	DISC	INTER	/AL, ÍN Y	OR INDICA (EARS, AN ABILITY,	ID ANNUAL	
1.25	<u>-</u>	5	10	25	50	100	(CON- SECU-		INTER\ EXCEEDAN	AL, ÍN Y	YEARS, AN ABILITY,	ID ANNUAL	NT 
							(CON-	DISCI  2 50%	INTER	/AL, ÍN Y	YEARS, AN	ID ANNUAL	
1.25	2 50 <b>%</b>	5 20%	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE	2	INTERN EXCEEDAN 5	/AL, ÎN Y NCE PROB <i>A</i> 10	YEARS, AN ABILITY,  25	ID ANNUAL IN PERCE 50	NT 
1.25 80% 16800	2 50% 22400	5 20 <b>%</b> 29200 3	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE DAYS)	2	INTERVEXCEEDAN 5 20% 26300	/AL, ÎN Y NCE PROB <i>A</i> 10	YEARS, AN ABILITY,  25	ID ANNUAL IN PERCE 50	NT 
1.25 80% 16800	2 50 <b>%</b>	5 20 <b>%</b> 29200 3	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE DAYS)	2 50%	INTERV EXCEEDAN 5 20%	/AL, ÍN ) NCE PROBA 10 10%	YEARS, AN ABILITY, 25 4%	ID ANNUAL IN PERCE 50 2%	100 1%
1.25 80% 16800	2 50% 22400	5 20 <b>%</b> 29200 3	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE DAYS)	2 50% 20100	INTERVEXCEEDAN 5 20% 26300	10 10% 29600	ZEARS, AN ABILITY, 25 4% 33200	ID ANNUAL IN PERCE 50 2%	100 1% 37300
1.25 80% 16800	2 50% 22400	5 20 <b>%</b> 29200 3	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE DAYS)	2 50% 20100 16900	1NTER\ EXCEEDAN 5 20% 26300 21200	10 10% 29600 23400	7EARS, AN ABILITY, 25 4% 33200 25600	1D ANNUAL 1N PERCE 50 2% 35400 26900	100 1% 37300 28000
1.25 80% 16800	2 50% 22400	5 20 <b>%</b> 29200 3	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE DAYS) 	2 50% 20100 16900 12900 9480	5 20% 26300 21200 16200 11800	10 10% 29600 23400 17800 12800	7EARS, ANABILITY, 25 4% 33200 25600 19300 13700	35400 26900 2000 14200	100 1% 37300 28000 20900 14500
1.25 80% 16800	2 50% 22400	5 20 <b>%</b> 29200 3	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE DAYS)	20100 16900 12900 9480 7070	5 20% 26300 21200 16200 11800 8690	10 10% 29600 23400 17800 12800 9360	7EARS, ANABILITY, 25 4% 33200 25600 19300 13700 9920	50 2% 35400 26900 20200 14200 10200	100 1% 37300 28000 20900 14500 10400
1.25 80% 16800	2 50% 22400	5 20 <b>%</b> 29200 3	10 10%	25 4%	50 2%	100	(CON- SECU- TIVE DAYS) 	2 50% 20100 16900 12900 9480	5 20% 26300 21200 16200 11800	10 10% 29600 23400 17800 12800	7EARS, ANABILITY, 25 4% 33200 25600 19300 13700	35400 26900 2000 14200	100 1% 37300 28000 20900 14500
1.25 80% 16800	2 50% 22400	5 20 <b>%</b> 29200 3	10 10% 3300 3	25 4% 58100 4	50 2% 1300 44	100 1%	(CON- SECU- TIVE DAYS) 	20100 16900 12900 9480 7070 5450 4820	5 20% 26300 21200 16200 11800 8690 6940 6100	10 10% 29600 23400 17800 12800 9360 7640 6660	33200 25600 19300 13700 9920 8310	35400 26900 2000 14200 10200 8680	37300 28000 20900 14500 10400 8980
1.25 80% 16800	2 50% 22400	5 20% 29200 3 287	10 10% 3300 3	25 4% 58100 4	50 2% 1300 44	100 1% 400 	(CON- SECU- TIVE DAYS) 	2 50% 20100 16900 12900 9480 7070 5450 4820	1NTER\ EXCEEDAN  5 20%  26300 21200 16200 11800 8690 6940 6100  ORD 1941-	29600 23400 17800 29600 23400 17800 9360 7640 6660	33200 25600 19300 19300 19700 9920 8310 7140	35400 26900 2000 14200 10200 8680	37300 28000 20900 14500 10400 8980

### 14194300 NORTH YAMHILL RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°21'55", long 123°22'40", in SW\ sec.25, T.2 S., R.6 W., Yamhill County, Hydrologic Unit 17090008, on right bank
0.4 mi downstream from small tributary, 1.3 mi upstream from Kutch Creek, 2.1 mi west of Fairdale, 9.5 mi west of Yamhill and at
mile 28.4.

DRAINAGE AREA. -- 9.03 mi<sup>2</sup>.

PERIOD OF RECORD. -- October 1958 to March 1966, October 1967 to September 1982.

GAGE. -- Water-stage recorder. Altitude of gage is 560 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years (water years 1959-65, 1968-82), 48.1  $ft^3/s$ , 72.34 in/yr, 34,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 6.88 ft, from rating curve extended above 1,000 ft<sup>3</sup>/s; maximum gage height, 9.7 ft Dec. 23, 1964 (backwater from debris); minimum discharge, 2.3 ft<sup>3</sup>/s Sept. 23-26, 1965.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	3.5	32	13	8.2	•65	2.2	1	3.1	2.7	2.5	2.4		
NOVEMBER	5.7	177	59	37	.62	10.3	3	3.2	2.7	2.6	2.4		
DECEMBER	7.8	202	106	52	.49	18.4	7	3.3	2.8	2.6	2.5		
JANUARY	10	228	110	59	.54	19.1	14	3.5	3.0	2.8	2.6		
FEBRUARY	20	179	92	36	.40	15.9	30	3.8	3.2	3.0	2.8		
MARCH	36	151	81	32	.40	14.0	60	4.5	3.7	3.4	3.1		
APRIL	25	91	54	19	•36	9.4	90	5.0	4.1	3.7	3.4		
MAY	16	46	29	8.3	. 28	5.1	120	5.9	4.8	4.3	4.1		
JUNE	9.3	35	15	6.1	.40	2.6	183	11	8.2	7.2	6.5		
JULY	5.3	12	7.4	1.6	.21	1.3							
AUGUST	3.5	7.5	4.9	1.0	.21	.8							
SEPTEMBER	2.7	16	5.8	3.1	.53	1.0							
ANNUAL	17	81	48	14	.28	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1959-82

DISCHARGE, YEARS, AI				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, ÍN Y	R INDICAT EARS, AND BILITY.	ANNUAL	
1.25 80%	2 50%	5 20% 	10 10%	25 <b>4%</b>	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
398	612	993	1310	1790							4070		
	CKEM						1	461	718	923	1230		
WE I GHTED	SKEW =	•418					2	363	521	637	797		
							7	277	363	413	471		
							15	209	267	301	341		
							30	164	197	212	226		
							60	129	163	181	200		
							90	113	144	160	175		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	IT OF TIM	 1E		
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85%	90%	95%
172	119	94	75	61	52	38	25	16	8.9	7.1	5.9	5.1	4.3	3.6

109

### 14195000 HASKINS CREEK NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'50", long 123°21'55", in NE‡ sec.13, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17090008, on left bank 150 ft downstream from Idlewild Creek, 0.5 mi upstream from Haskins Creek Dam, and 11 mi northwest of McMinnville.

DRAINAGE AREA .-- 6.48 mi2.

98

70

53

42

34

29

18

11

6.5 3.9

3.1

2.5

2.1

1.7 1.1

PERIOD OF RECORD. -- October 1928 to September 1951.

GAGE.--Water-stage recorder. Wooden control since September 1936. Altitude of gage is 815 ft, by barometer. Prior to Oct. 1, 1930, at datum 1.00 ft higher.

REMARKS.--No regulation. Since Sept. 2, 1937, a small amount of water (average, 1.4 ft<sup>3</sup>/s) has been diverted at a point 800 ft upstream for municipal supply of McMinneville.

AVERAGE DISCHARGE.--23 years (water years 1929-51), 26.4 ft<sup>3</sup>/s, 19,110 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 610 ft³/s Mar. 31, 1931, gage height, 4.00 ft (before control was built); minimum prior to diversion above station, 1.0 ft³/s Oct. 8, 1932.

M													
			uran	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	- 1	NTERVAL,	IN YEAR	INDICATI S, AND AI ILITY, II	NNUAL N	DN−
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL	1.4 1.6 11 13 22 12	26 80 141 118 108 92 70	5.6 27 53 55 58 49 31	5.7 22 33 28 25 22	1.02 .81 .63 .50 .42 .45	1.8 8.7 17.1 17.8 18.8	1 3 7 14 30 60 90	.9 1.0 1.1 1.2 1.4 1.8 2.0	.4 .5 .6 .7 1.0	.3 .4 .4 .5 .7	.2 .2 .2 .3		
MAY JUNE JULY AUGUST	4.9 2.8 .8 .3	38 20 6.8 3.8	15 7.2 3.3 2.0	7.5 3.5 1.5	.50 .49 .44 .47	10.1 4.9 2.3 1.1	120 183	2.4 4.6	1.6 3.2	1.2 2.6	.6 1.0 2.2		
SEPTEMBER	.3	4.2	2.0	1.0	-51	.7							
ANNUAL  MAGNIT		38 PROBABILI D ON PERI				100  FLOW	 MAG	NITUDE A			F ANNUAL		.OW
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF INS	STANTANEC CORD 1929 CURRENCE ABILITY,	OUS PEAK 9-51 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASED DISCHA	ON PERIORS  RGE, IN O	OD OF REC		29-51 ED RECUR ANNUAL	RRENCE
MAGNIT	FUDE AND BASE	PROBABILI D ON PERI	TY OF INS	STANTANE CORD 1929 CURRENCE	OUS PEAK 9-51 INTERVAL IN PERCE	FLOW	PERIOD	BASED DISCHA	ON PERIORS  RGE, IN O	OD OF REC	CORD 192 INDICATI ARS, AND	29-51 ED RECUR ANNUAL	RRENCE
MAGNIT DISCHARGE, YEARS, /	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1929 CURRENCE ABILITY,	OUS PEAK 9-51 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E: 2 50%	ON PERIO	OD OF REC CFS, FOR L, IN YE. E PROBAB	INDICATI ARS, AND ILITY, II	29-51 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT DISCHARGE, YEARS, / 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN: OD OF REC CATED REC NCE PROB	STANTANEC CORD 1929 CURRENCE ABILITY,	OUS PEAK 9-51 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASED DISCHA E:	ON PERIOR ON PER	OD OF REC	INDICATI ARS, AND ILITY, II	29-51 ED RECUF ANNUAL N PERCEN	RRENCE IT
MAGNITO DISCHARGE, YEARS, / 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN: OD OF REC CATED REC NCE PROB/ 10 #	STANTANECORD 1929  CURRENCE ABILITY,  25 4%	OUS PEAK 9-51 INTERVAL IN PERCE 50 2%	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E.  2 50%  234 188 146 114 89 70 64	ON PERIOD ON PER	CFS, FOR L, IN YELE PROBAB	192 INDICATI ARS, AND ILITY, II 25 4% 466 368 277 195 146 110	29-51 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT DISCHARGE, YEARS, / 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI L EXCEEDA 5 20% 396 .244	TY OF IN: OD OF REC CATED REC NCE PROB 10 10 474	STANTANECCORD 1929 CURRENCE ABILITY, 25 4% 578	DUS PEAK 9-51 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 7 15 30 60 90	DISCHA E. 2 50% 234 188 146 114 89 70 64 OF RECOR	ON PERIOD  RGE, IN C  INTERVAL  XCEEDANCI  5  20  320  253  197  150  115  89  80  D 1929-5	OD OF REG	192 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	29-51 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT

### 14196500 NORTH YAMHILL RIVER NEAR PIKE, OR

LOCATION.--Lat 45°22'15", long 123°17'10", in NE‡ sec.27, T.2 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on left bank 1.3 mi west of Pike, 2.3 mi downstream from Haskins Creek, and 5.2 mi northwest of Yamhill.

DRAINAGE AREA .-- 47.8 mi2.

PERIOD OF RECORD. -- October 1940 to September 1951.

GAGE.--Water-stage recorder. Datum of gage is 249.22 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Oct. 23, 1940, staff gage at same site and datum.

REMARKS.--Occasional diurnal fluctuations caused by small dams upstream; no seasonal regulation. Water supply for city of McMinnville is diverted from Haskins Creek above station.

AVERAGE DISCHARGE.--11 years (water years 1941-51),  $184 \text{ ft}^3/\text{s}$ , 133,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,780 ft<sup>3</sup>/s Feb. 10, 1949, gage height, 9.28 ft, from rating curve extended above 2,500 ft<sup>3</sup>/s by logarithmic plotting; minimum, 4.2 ft<sup>3</sup>/s Sept. 11, 1944; minimum dally, 6.0 ft<sup>3</sup>/s Sept. 10, 1944.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-51 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-51

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	13	206	54	59	1.10	2.4	1	8.4	7.2	6.6	6.1		
NOVEMBER	81	474	245	138	. 56	11.0	3	8.6	7.4	6.8	6.4		
DECEMBER	93	729	418	204	.49	18.7	7	9.1	7.8	7.1	6.6		
JANUARY	132	765	384	177	.46	17.2	14	9.4	8.1	7.6	7.1		
EBRUARY	162	850	477	201	.42	21.4	30	10	8.9	8.4	8.0		
<b>MARCH</b>	92	609	297	153	.52	13.3	60	12	11	9.9	9.5		
\PRIL	69	287	172	73	.43	7.7	90	14	12	11	11		
4AY	48	227	92	51	- 55	4.1	120	17	15	14	13		
JUNE	30	65	45	11	.26	2.0	183	33	29	26	25		
JULY	15	29	21	4.5	.21	1.0							
AUGUST	11	18	13	2.2	. 17	.6							
SEPTEMBER	9.3	28	14	5.9	.43	.6							
ANNUAL	104	239	184	50	•27	100							

)ISCHARGE, YEARS, AI							PERIOD (CON-		INTERV	CFS, FOF	EARS, AND	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2190	2780	3560	4060					2010	2400	27.40			
WEIGHTED	SKEW =	•107					1 3 7	2010 1490 1110	2480 1770 1390	2740 1920 1550			
							15 30	865 649	1090 830	1200 913			
							60 90	521 474	652 602	712 665			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-51

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
717	495	369	287	231	187	121	75	49	29	22	18	14	12	9.9

111

### 14197000 NORTH YAMHILL RIVER AT PIKE, OR

LOCATION.--Lat 45°22'10", long 123°15'15", in NWL sec.25, T.2 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on right bank 500 ft downstream from Turner Creek, 0.5 mi southeast of Pike, 4.0 mi northwest of Yamhill, and at mile 20.5.

DRAINAGE AREA. -- 66.8 mi<sup>2</sup>.

938

638

479

384

313

256

166

97

53

28

20

16

13

11

8.4

PERIOD OF RECORD. -- October 1948 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 192.66 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Aug. 21, 1950, water-stage recorder at datum 1.02 ft higher.

REMARKS.--Seasonal regulation by Haskins Creek Reservoir; occasional diurnal fluctuation caused by Haskins Creek Dam and smaller dams upstream. Water supply for city of McMinnville is diverted from Haskins Creek above station and that for city of Yamhill is diverted from Turner Creek above station. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--25 years, 242 ft3/s, 49.20 in/yr, 175,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,530  $ft^3/s$  Dec. 21, 1955, gage height, 12.42 ft, from rating curve extended above 2,600  $ft^3/s$ , on basis of slope-area measurement of peak flow; mlnimum, 1.7  $ft^3/s$  Sept. 3, 1972.

		DISCHA					FOR PERIOD  EXCEEDED FOR				IME		
			DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	RD 1949-7	3			
							90	638 	762 	822	882	919	
							60	724	880	963	1050	1110	
							30	936	1110	1200	1280	1330	
							15	1250	1510	1630	1750	1820	
							7	1570	1940	2170	2450	2640	
WEIGHTE	D SKEW =	.472					3	2030	2620	3080	3740	4280	
METAUTE		470					1 -	2700	3680	4410	5420	6250	
2970	3990	5590	6790	8460	9830				7.00				
							DAYS)	50%	20%	10%	4%	2%	19
80%	50%	20%	10%	4%	2%	1%	TIVE	2	5	10	25	50	100
1.25	2	5	10	25	50	100	SECU-						
YEARS,	AND ANNUA	L EXCEEDA	NCE PROE	BABILITY,	IN PERCE	NT 	PERIOD (CON-	1				D ANNUAL IN PERCEN	IT
		FOR INDI						DISCH				TED RECUR	RENCE
MAGNI		PROBABILI D ON PERI				FLOW	MA:		AND PROBA			L HIGH FL 949-73	.OW
NNUAL	159 	366	242	47	.19 	100							
SEPTEMBER	6.9	39	14	6.8	.50	.5							
AUGUST	5.6	21	12	3.6	.30	• 4							
JULY	10	34	20	5.9		.7							
JUNE	26	85	48	17	.35	1.7	183	34	25	21	18	15	
MAY	58	214	111	46	.41	3.8	120	16	12	11	9.2	8.0	
APRIL	78	411	227	87	.38	7.8	90	13	9.8	8.6	7.7		
MARCH	144	807	441	180	.41	15.1	60	11	8.3	7.2	6.4		
FEBRUARY	171	1163	556	257	.46	19.1	30	9.3		6.3	5.7		
JANUARY	162	1122	636	312	. 49	21.8	14	8.6	6.5	5.4	4.6	3.7	
DECEMBER	187	1023	545	242	.44	18.7	7	8.2	6.1	4.8	3.9	2.9	
NOVEMBER	17	683	260	166	.64	8.9	3	7.9	5.8	4.6	3.6		
OCTOBER	8.5	162	48	43	.89	1.6	1	7.7	5.6	4.3	3.4	2.4	
<b>10N</b> TH	(CFS)	(CFS)	(CFS)	(CFS)	ATION 	RUNOFF	TIVE DAYS)	2 50% 	5 20 <b>%</b> 	10 10%	20 5%	50 2% 	100
	MINIMUM		MEAN	TION	VARI-	ANNUAL	SECU-						
				DEVIA-	CIENT OF	OF	(CON-		EXCEEDANG	E PROBA	BILITY,	IN PERCEN	IT.
				DARD	COEFFI-	PERCENT	PERIOD					ANNUAL NO	
				STAN-				DISCH	ARGE. IN	CES. FO	R INDICA	TED RECUF	RENCE

### 14198000 WILLAMETTE RIVER AT WILSONVILLE, OR

LOCATION.--Lat 45°17'57", long 122°45'00", in SE¼NE¼ sec.24, T.3 S., R.1 W., Clackamas County, Hydrologic Unit 17090007, on left bank, 0.2 mi downstream from Boeckman Creek, 1.1 mi downstream from bridge on Interstate Highway 5 at Wilsonville, and at mile 37.4

DRAINAGE AREA. -- 8,400 mi<sup>2</sup>, approximately.

PERIOD OF RECORD. -- October 1948 to July 1973.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1954, nonrecording gage at Butteville, 5.9 mi upstream at same datum. Oct. 1, 1954, to Nov. 2, 1970, at site 1.1 mi upstream at same datum.

REMARKS.---Flow regulated by 12 reservoirs above station since 1968. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--24 years (water years 1949-72), 28,900 ft<sup>3</sup>/s, 21,000,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 339,000 ft<sup>3</sup>/s Dec. 25, 1964, elevation, 94.74 ft; minimum daily, 3,600 ft<sup>3</sup>/s Nov. 29, 30, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached an elevation of about 105 ft at Wilsonville (discharge not determined).

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1949-72 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1950-72

	MINIMUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	., IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2</b> %	100 1%
OCTOBER	4548	25010	13730	5390	.39	3.9	1	5750	4830	4300	3860		
NOVEMBER	4217	80980	31700	16730	.53	9.1	3	5780	4850	4330	3880		
DECEMBER	17180	123100	54510	29110	.53	15.6	7	5860	4920	4390	3950		
JANUARY	14300	114100	61280	28670	.47	17.6	14	5930	5000	4490	4070		
FEBRUARY	22800	100700	54180	20080	.37	15.5	30	6090	5170	4670	4270		
MARCH	15890	83510	41260	18810	.46	11.8	60	6380	5400	4930	4550		
APRIL	13630	54450	30520	11430	.37	8.7	90	6920	5870	5360	4970		
MAY	12870	41430	24400	8309	.34	7.0	120	7840	6550	5940	5470		
JUNE	7200	26330	15090	5571	.37	4.3	183	11000	9140	8290	7660		
JULY	5542	11660	8092	1911	.24	2.3							
AUGUST	4413	8938	6571	1242	. 19	1.9							
SEPTEMBER	4573	12250	7840	2061	.26	2.2							
ANNUAL	20890	43870	28990	5403	. 19	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1949-72

DISCHARGE, YEARS, A							PERIOD (CON-	DISC	INTER	RVAL, ÍN	OR INDICA	D ANNUAL	
1.25 80%	2 50%	5 20% 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%				100
							1	146000	189000	223000	274000		
WEIGHTED	SKEW =						3	140000	180000	212000	259000		
							7	126000	161000	186000	222000		
							15	103000	130000	148000	170000		
							30	84100	105000	119000	136000		
							60	67300	84900	96900	113000		
							90	60400	74900	84100	95400		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1949-72

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TIME			
5,%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
94600	69700	53600	43100	35700	30400	24100	18700	13900	10400 8	940 7	780 6	960	6370	5670

113

# WILLAMETTE RIVER BASIN

LOCATION.--Lat 45°00'35", long 122°28'45", in NE\NE\ sec.31, T.6 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on right bank 0.5 mi upstream from Pine Creek, 5 mi southeast of Wilhoit, and at mile 32.5.

14198500 MOLALLA RIVER ABOVE PINE CREEK, NEAR WILHOIT, OR

DRAINAGE AREA. -- 97.0 mi<sup>2</sup>, at cableway 0.2 mi downstream.

PERIOD OF RECORD. -- October 1935 to September 1982.

1850

1240

966

801

689

592 434

319

219

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 791.35 ft National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1, 1935, to Sept. 30, 1945, and Oct. 1, 1945, to Feb. 9, 1961, water-stage recorder at site 0.3 mi downstream at datums 8.42 ft and 10.44 ft lower, respectively. Feb. 10, 1961, to July 21, 1966, water-stage recorder at site 0.2 mi downstream at datum 5.99 ft lower.

REMARKS.--No regulation or diversion above station. Records given herein are for measuring site.

AVERAGE DISCHARGE.--47 years, 544 ft<sup>3</sup>/s, 76.16 in/yr, 394,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,200 ft<sup>3</sup>/s; minimum, 18 ft<sup>3</sup>/s Oct. 3, 1965.

,,,	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1936-82		MA		D ON PER	HOD OF I	RECORD	1937-82	
		MANIMUM		STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	DISCH		., IN YE	OR INDICARS, AND	ANNUAL N	10N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY	29 24 106 119	1020 1799 2604 2574	243 731 1056 1032	227 482 543 577	.93 .66 .51	3.7 11.2 16.1 15.8	1 3 7 14	30 31 32 34	24 25 25 27	22 22 23 24	20 21 21 22	19 19 20 - 20	18 18 19 19
FEBRUARY MARCH APRIL MAY	131 258 198 147	2411 1705 1366 1062	933 745 720 569	447 314 238 224	.48 .42 .33 .39	14.2 11.4 11.0 8.7	30 60 90 120	38 46 57 79	29 35 42 55	26 30 36 45	24 27 32 39	22 25 28 33	20 23 26 29
JUNE JULY AUGUST SEPTEMBER	74 37 23 25	726 211 193 240	291 101 54 76	152 41 28 56	.52 .41 .52 .73	4.4 1.5 .8 1.2	183	168	122	104	91	78	71
ANNUAL	241	921	544	133	.24	100							
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 193	INTERVAL IN PERCE	FLOW , IN	 PERIOD (CON-	BASE	AND PROB D ON PER IARGE, IN INTERV EXCEEDAN	CFS, FO	RECORD 1	1936-82  ATED RECUND ANNUAL	JRRENCE
DI SCHARGE	BASE , IN CFS,	D ON PERI	OD OF RE	CORD 193	6-82 INTERVAL IN PERCE	FLOW	PERIOD	BASE	D ON PER	CFS, FO	RECORD 1	1936-82  ATED RECUND ANNUAL	URRENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	CATED RE	CORD 193 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN	CFS, FO	RECORD 1  OR INDICA YEARS, AN ABILITY,  25	1936-82 ATED RECUND ANNUAL IN PERCE	URRENCE - - - - - - 100
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECOME OF RELATED RESIDENT OF ROBERT OF	CORRENCE BABILITY, 25 4%	6-82 INTERVAL IN PERCE 50 2% 8800 21	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  5850 4400 3190 2220 1700 1330 1190	IARGE, IN INTERVEXCEEDAN  7880 5860 4170 2830 2150 1670	CFS, F(AL, IN CE PROBA 10 10% 8970 6660 4660 3140 2370 1860 1640	OR INDICA YEARS, AN ABILITY,  25 4%  10100 7530 5160 3440 2580 2050	1936-82  ITED RECUID ANNUAL IN PERCE 50 2%  10800 8080 5450 3620 2710 2180	IRRENCE 100 1% 11500 8560 5690 3770 2810 2290
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECOME OF RELATED RESIDENCE PROBLEM TO THE RESIDENCE PROBLEM TO T	CORRENCE SABILITY,  25 4% 6300 1	6-82 INTERVAL IN PERCE 50 2% 8800 219	FLOW  , IN  NT  100  1%  500	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	BASE  DISCH  2 50%  5850 4400 3190 2220 1700 1330 1190  OF RECC	IARGE, IN INTERVEXCEEDAN  7880 5860 5860 4170 2830 2150 1670 1480	CFS, F(AL, IN CE PROBAL 10 10%	OR INDICA YEARS, AN HBILITY, 25 4% 10100 7530 5160 3440 2580 2050 1800	1936-82  ITED RECUID ANNUAL IN PERCE 50 2%  10800 8080 5450 3620 2710 2180	IRRENCE 100 1% 11500 8560 5690 3770 2810 2290

### 14200000 MOLALLA RIVER NEAR CANBY, OR

LOCATION.--Lat 45°14'40", long 122°41'10", in NW\$NE\$ sec.9, T.4 S., R.1 E., Clackamas County, Hydrologic Unit 17090009, on left bank at upstream side of Goods bridge, 1.5 mi south of Canby, and at mile 6.0.

DRAINAGE AREA. -- 323 mi2.

PERIOD OF RECORD. -- August 1928 to September 1959, October 1963 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 104.00 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1933, nonrecording gage and Oct. 24, 1933, to Sept. 26, 1955, water-stage recorder at present site and at datum 1.00 ft higher. Sept. 27, 1955, to June 3, 1956, water-stage recorder at site 145 ft downstream at present datum. June 4, 1956, to Sept. 30, 1959, water-stage recorder at site 0.3 mi downstream at datum 1.98 ft lower. Oct. 1, 1963, to May 4, 1964, nonrecording gage at present site and datum.

REMARKS.--No regulation. Numerous small diversions for irrigation above station.

AVERAGE DISCHARGE.--46 years (water years 1929-59, 1964-78), 1,163 ft<sup>3</sup>/s, 48.90 in/yr, 842,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.76 ft; minimum, 20 ft<sup>3</sup>/s Aug. 27, 1959.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1929-78

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-78

	MINIMON	Mayinini	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		ARGE, IN INTERVAL EXCEEDANG	, IN YEAR	RS, AND /	NNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	60	2201	447	471	1.05	3.2	1	57	44	39	36	33	31
NOVEMBER	53	3864	1525	1083	.71	10.9	3	59	46	41	38 -	34	33
DECEMBER	211	5835	2292	1268	•55	16.4	7	61	48	43	39	35	33
JANUARY	303	5124	2433	1221	.50	17.4	14	65	51	45	41	37	35
FEBRUARY	270	4265	1916	876	.46	13.7	30	73	56	49	44	39	37
MARCH	505	3559	1711	692	- 40	12.2	60	89	66	58	52	46	42
APRIL	383	2954	1472	520	.35	10.5	90	109	79	67	59	52	47
MAY	275	2376	1110	445	.40	7.9	120	147	101	85	73	62	56
JUNE	164	1687	624	334	.54	4.5	183	317	223	187	162	138	125
JULY	77	491	207	94	.46	1.5							
AUGUST	42	378	106	58	.54	.8							
SEPTEMBER	46	55 <b>5</b>	144	108	.75	1.0							
ANNUAL	524	1822	1162	313	.27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1929-78

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1929-78

DISCHARGE YEARS,	-	•		RECURREN ROBABILII			PERIOD (CON-	DISC	INTER	VAL, İN '	YEARS, A	ATED RECI ND ANNUAL	L
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1 <b>%</b>	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%
9170	13600	20200	25000	31300	36300	41400							
							1	10900	15800	19000	23100	26100	29000
WE I GHTE	D SKEW =	045					3	8590	12300	14600	17600	19700	21700
							7	6510	8830	10100	11500	12500	13300
							15	4770	6210	6920	7600	7990	8320
							30	3710	4720	5200	5640	5880	6070
							60	2880	3710	4180	4680	5010	5300
							90	2580	3280	3670	4090	4370	4610

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-78

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	:		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
3930	2710	2110	1770	1510	1300	974	699	445	244	177	136	106	83	66

14200300 SILVER CREEK AT SILVERTON, OR

115

LOCATION.--Lat 45°00'34", long 122°47'15", in NEt sec.34, T.6 S., R.1 W., Marion County, Hydrologic Unit 17090009, on right bank 300 ft downstream from railroad bridge in Silverton, 2.5 mi upstream from Brush Creek, and at mile 3.4.

DRAINAGE AREA .-- 47.9 mi2.

776

528

405

324

269

227

161

105

63

35

27

20

14

11

7.0

PERIOD OF RECORD. -- October 1963 to September 1968, October 1970 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 218.5 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Several small diversions for irrigation and municipal use above station.

AVERAGE DISCHARGE.--14 years, 208 ft<sup>3</sup>/s, 58.97 in/yr, 150,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.15 ft; minimum, 2.0 ft<sup>3</sup>/s Aug. 20, 21, 1967.

				STAN- DARD	COEFFI-	PERCENT	PERIOD		NTERVAL,	IN YEAR	R INDICATE	NNUAL NO	)N-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	DEVIA- TION (CFS)	CIENT OF VARI- ATION	OF ANNUAL RUNOFF	(CON- SECU- TIVE DAYS)	2 50%	5 20%	10 10%	31LITY, II  20 5%	50 2%	100
CTOBER	9.5	135	46	37	.80	1.9	1	5.8	3.9	3.1	2.6	  	
OVEMBER	40	937	274	234	•85 55	10.9	3	6.1	4.1	3.3	2.8 3.0		
DECEMBER JANUARY	37 57	973 785	498 526	276 233	.55 .44	19.9 21.0	7 14	6.6 7.6	4.4 5.0	3.6 4.0	3.3		
EBRUARY	85	614	336	233 157	.47	13.4	30	9.3	6.0	4.7	3.8		
MARCH	105	584	324	150	.46	12.9	60	12	7.4	5.8	4.7		
APRIL	106	411	226	86	.38	9.0	90	15	9.5	7.4	6.1		
MAY	62	221	136	51	.37	5.4	120	20	14	11	9.6		
JUNE	26	115	64	29	.45	2.6	183	39	28	24	21		
JULY	10	45	25	9.9	.40	1.0							
AUGUST	4.0	59	17	14	.86	.7							
SEPTEMBER	5.4	82	31	26	.85	1.2							
ANNUAL	97	368	208	68	.33	100							
MAGNII		PROBABILI D ON PERI				FLOW	MA(				OF ANNUAL CORD 196		.OW
OISCHARGE, YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 1964 CURRENCE	1-79 INTERVAL IN PERCE	, IN NT	 PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RECEIVED		54-79 ED RECUR ANNUAL	RRENCE
DISCHARGE,	BASE , IN CFS,	D ON PERI	OD OF RE	CORD 1964 CURRENCE	1-79 INTERVAL IN PERCE	, IN	PERIOD (CON- SECU- TIVE	BASEC DISCHA E	ON PERI	OD OF RECOMMENDED	CORD 196 R INDICATE EARS, AND BILITY, IN	54-79 ED RECUF ANNUAL N PERCEN	RRENCE
OISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY,	I-79 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU-	BASEC DISCHA	ON PERI	OD OF RECEIVED	CORD 196 R INDICATE EARS, AND BILITY, IN	54-79 ED RECUP ANNUAL N PERCEN	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA E	ON PERI	OD OF RECOMMENDED	CORD 196 R INDICATE EARS, AND BILITY, IN	54-79 ED RECUF ANNUAL N PERCEN	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2 50%  1960 1560	O ON PERI	OD OF RE	CORD 196 R INDICATE EARS, AND BILITY, II  25 4%	54-79 ED RECUF ANNUAL N PERCEN	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  2 50%  1960 1560 1210	O ON PERI	OD OF RE CFS, FOF L, IN YE E PROBAE 10 10%  3360 2640 1850	25 4% 4000 3190 2140	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1960 1560 1210 937	2830 2210 1180	OD OF RE CFS, FOF L, IN YE E PROBAE 10 10% 3360 2640 1850 1310	25 (A) (A) (A) (A) (A) (A) (A) (A) (A) (A)	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1960 1560 1210 937 739	2830 2210 1180 906	OD OF RE	25 4% 4000 3190 2140 1450 1080	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  1960 1560 1210 937 739 562	2830 2210 1180 906 731	OD OF RECOMPANY OF	25 4% 4000 3190 2140 1450 1080 956	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 1964 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1960 1560 1210 937 739	2830 2210 1180 906	OD OF RE	25 4% 4000 3190 2140 1450 1080	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	CATED RE NCE PROB 10 10 4920	CORD 1964 CURRENCE ABILITY, 25 4% 6180	INTERVAL IN PERCE	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1960 1560 1210 937 739 562 488	2830 2210 1610 1180 906 731 637	OD OF RECEIVED OF	25 4% 4000 3190 2140 1450 1080 956	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	CATED RE NCE PROB 10 10 4920  DURATIO	CORD 1964 CURRENCE ABILITY, 25 4% 6180	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1960 1210 937 739 562 488  OF RECOR	2830 2210 1610 1610 1610 1610 1610 1610 161	OD OF RECEIVED OF	25 4%	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE

## 14201000 PUDDING RIVER NEAR MOUNT ANGEL. OR

LOCATION.--Lat 45°03'47", long 122°49'45", in SE± sec.8, T.6 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank on downstream side of Cline Bridge, 1.5 mi west of Mount Angel, 3.5 mi upstream from Little Pudding River, and at mile 40.4.

## DRAINAGE AREA. -- 204 mi2.

2590

1860

1430

1150

971

814

588

401

232

113

75

50

36

19

PERIOD OF RECORD.--October 1939 to March 1966. Monthly discharge only January to September 1945, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 119.76 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1945, staff or wire-weight gages at same site and datum.

REMARKS.--No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--26 years (water years 1940-65), 711 ft3/s, 514,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 31.50 ft; maximum gage height, 31.63 ft Dec. 22, 1964; minimum discharge observed, 2.4 ft<sup>3</sup>/s Aug. 9, 1965.

.,,	ONTHLY AN	D ANNUAL	MEAN DIS	CHARGES	1940-65		MA		AND PROBA ED ON PERI			L LOW FLC 1941-65	W
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	DISCH	INTERVAL,	IN YEA	RS, AND	TED RECUR ANNUAL NO IN PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 2 <b>%</b>	100
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE	21 41 297 461 469 331 283 173 78	1121 2483 3401 3011 2961 2192 1750 1135	254 937 1456 1531 1501 1127 845 538 237	274 620 766 805 630 472 372 263	1.08 .66 .53 .53 .42 .42 .44	3.0 10.9 17.0 17.8 17.5 13.1 9.9 6.3	1 3 7 14 30 60 90	15 16 17 18 21 29 37 58	9.9 10 11 13 14 22 27 40	8.0 8.4 9.3 10 12 18 22 33	7.1 7.9 9.1 10 16 20 28	5.8 6.6 7.9 8.6	
JULY AUGUST SEPTEMBER	24 10 12	514 194 57 150	76 31 44	107 42 14 31	.45 .54 .44 .71	2.8 .9 .4 .5	183	157 	113	95 	82 		
ANNUAL	411	1041	711	150	.21	100							
DI SCHADOF													
YEARS,	AND ANNUA	L EXCEEDA	NCE PROE	BABILITY,	INTERVAL IN PERCE	NT	PERIOD (CON-	DISCH	INTERVA	L, ÍN Y	EARS, AN	TED RECUR ID ANNUAL IN PERCEN	
					IN PERCE			DISCH	INTERVA	L, ÍN Y	EARS, AN	ID ANNUAL	
YEARS, 1.25 80%	AND ANNUA 2	5 20% 	NCE PROE 10 10%	25 4%	IN PERCE	NT 	(CON- SECU- TIVE	2	INTERVA EXCEEDANC 5	L, ÎN Y E PROBA 10	EARS, AN BILITY, 25	ID ANNUAL IN PERCEN 50	T 100
YEARS, 7 1.25 80%	2 50% 6150	9560 1	NCE PROE 10 10 10 2000 1 DURATIO	3ABILITY, 25 4\$ 5200 1	1N PERCE 50 2% 7800 OF DAILY	NT 100 1%	(CON- SECU- TIVE DAYS) 	2 50% 5580 4860 3920 3060 2390 1690 OF RECC	7950 6640 5210 3860 2970 2380 2110	9400 7650 5890 4220 3240 2330	25 4%	12300 9480 7010 4700 3630 3120	T 100
YEARS, 1.25 80%	2 50% 6150	9560 1	NCE PROE 10 10 10 2000 1 DURATIO	3ABILITY, 25 4\$ 5200 1	TN PERCE  50 2%  7800  OF DAILY I	MEAN FLOW	(CON- SECU- TIVE DAYS) 	2 50% 5580 4860 3920 3060 2390 1690 OF RECC	7950 6640 5210 3860 2970 2380 2110	9400 7650 5890 4220 3240 2330	25 4%	12300 9480 7010 4700 3630 3120	T 100

# 14201500 BUTTE CREEK AT MONITOR, OR

117

LOCATION.--Lat 45°06'06", long 122°44'42", in SE±SE± sec.25, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank at downstream side of highway bridge at Monitor and at mile 7.7.

DRAINAGE AREA .-- 58.7 mi2.

821

541

412 335

279 238

PERIOD OF RECORD.--January to December 1936, October 1940 to September 1952, October 1966 to September 1982. Monthly discharge only for January to December 1936, published is WSP 1318.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft, from topographic map. Jan. 20 to Oct. 22, 1936, nonrecording gage at present site at different datum. Oct. 23 to Dec. 19, 1936, nonrecording gage at site 70 ft downstream at different datum. Oct. 1, 1940, to Sept. 30, 1952, nonrecording gage at present site at 151.35 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Diversions for irrigation by pumping above station.

AVERAGE DISCHARGE.--28 years (water years 1941-52, 1967-82), 221 ft<sup>3</sup>/s, 51.13 in/yr, 160,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,310 ft $^3$ /s Jan. 21, 1972, gage height, 15.26 ft, from floodmark; minimum, 0.04 ft $^3$ /s July 23, 24, Aug. 26, 1982.

#### STATISTICAL SUMMARIES

М	ONTHLY AN	ND ANNUAL	MEAN DIS	SCHARGES	1941-82		MA		AND PROBA			L LOW FLO 942-82	W
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL,	, IN YEA	RS, AND	TED RECUF ANNUAL NO IN PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	9.3	485	90	106	1.18	3.4	1	4.1	2.1	1.4	.9	.6	
NOVEMBER	28	779	298	201	.67	11.2	3	4.8	2.5	1.7	1.2	.7	
DECEMBER	30	942	488	219	.45	18.3	7	5.7	3.1	2.1	1.5	.9	
JANUARY	42	870	477	239	.50	17.9	14	6.5	3.8	2.7	2.0	1.3	
FEBRUARY	49	977	431	206	.48	16.2	30	8.0	4.8	3.5	2.6	1.8	
MARCH	97	593	320	131	- 41	12.0	60	11	6.3	4.6	3.4		
APRIL	76	430	252	88	. 35	9.5	90	15	8.7	6.5	5.0		
MAY	56	376	170	70	.41	6.4	120	21	13	10	8.1	6.2	
JUNE	25	182	79	37	.46	3.0	183	51	37	31	26	21	
JULY	5.1	73	26	15	.60	1.0		ر 					
AUGUST	2.1	49	13	9.5		.5							
SEPTEMBER	3.3	72	21	18	•86	.8							
ANNUAL	82	353	221	60	.27	100							
MAGNI		PROBABILI D ON PERIO				FLOW	MAC		AND PROBA			L HIGH FL 941-82	.OW
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDICAL EXCEEDA	OD OF RE	CORD 194 COURRENCE	1-82 INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASEI DISCHA	ON PERI	CFS, FOR	ECORD 1	941-82 TED RECUR	RENCE
DISCHARGE	BASE , IN CFS,	FOR INDIC	OD OF RE	CORD 194	1-82 INTERVAL IN PERCE	 , IN	PERIOD (CON- SECU- TIVE	BASEC DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANCE	CFS, FOR	ECORD 1' R INDICA EARS, ANI BILITY,	941-82 TED RECUR D ANNUAL IN PERCEN	RENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RECOMMENDED OF RESERVED TO 10%	ECORD 194 ECURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU-	BASEC DISCHA	O ON PERI	CFS, FOR	R INDICA EARS, AN	941-82 TED RECUR D ANNUAL IN PERCEN	RENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDICAL EXCEEDA	OD OF RECATED RENCE PROE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANCE	CFS, FOR	ECORD 1' R INDICA EARS, ANI BILITY,	941-82 TED RECUR D ANNUAL IN PERCEN	RENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RECOMMENDED OF RESERVED TO 10%	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOR	R INDICA EARS, AND BILITY, 25 4%	TED RECURD ANNUAL IN PERCEN 2%	RENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RECOMMENDED OF RESERVED TO 10%	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  2460 1850	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOF LL, IN YE E PROBAL 10 10\$ 3800 2960	R INDICA EARS, AND BILITY, 25 4% 4290 3410	941-82 TED RECUR D ANNUAL IN PERCEN 50 2\$ 4590 3700	RENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RECOMMENDED OF RESERVED TO 10%	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  2460 1850 1420	ARGE, IN INTERVA EXCEEDANC 5 20% 3330 2560 1880	CFS, FOR L, IN YE E PROBABLE 10 10\$ 3800 2960 2100	R INDICA EARS, ANN BILITY, 25 4% 4290 3410 2320	941-82 TED RECUR D ANNUAL IN PERCEN 50 2% 4590 3700 2440	RENCE
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RECOMMENDED OF RESERVED TO 10%	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  2460 1850 1420 992	5 20% 3330 2560 1880 1270	CFS, FOR LL, IN YI CE PROBAB 10 10\$ 3800 2960 2100 1400	R INDICA EARS, AND BILITY, 25 4% 4290 3410 2320 1520	941-82 TED RECUR D ANNUAL IN PERCEN 50 2% 4590 3700 2440 1590	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RECOMMENDED OF RESERVED TO 10%	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  2460 1850 1420 992 761	3330 2560 1880 1270 941	CFS, FOF LL, IN YIEE PROBAE 10 10\$ 3800 2960 2100 1400 1010	R INDICA R INDICA EARS, AN BILITY, 25 4% 4290 3410 2320 1520 1070	941-82 TED RECURD ANNUAL IN PERCEN 2% 4590 3700 2440 1590 1100	RENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RECOMMENDED OF RESERVED TO 10%	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E  2  50%  2460 1850 1420 992 761 591	3330 2560 1880 1273 3330	CFS, FOR L, IN YEE PROBAGE 10 10 2960 2100 1400 1010 797	R INDICA: R INDICA: EARS, AN BILITY,  25 4%  4290 3410 2320 1520 1070 854	941-82 TED RECURD ANNUAL IN PERCEN 50 2\$ 4590 3700 2440 1590 1100 885	100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	CATED RENCE PROE	ECURRENCE BABILITY, 25 45	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 7 15 30 60 90 90	DISCHA  E  2  50%  2460 1850 1420 992 761 591 529	3330 2560 1880 2941 733 658	CFS, FORL, IN YEE PROBAL  10 10\$  3800 2960 2100 1400 1010 797 717	R INDICA R INDICA EARS, AN BILITY, 25 4% 4290 3410 2320 1520 1070	941-82 TED RECURD ANNUAL IN PERCEN 2% 4590 3700 2440 1590 1100	100 1%
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	CATED RENCE PROE	ECURRENCE BABILITY, 25 45	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E  2  50%  2460 1850 1420 992 761 591 529	3330 2560 1880 2941 733 658	CFS, FORL, IN YEE PROBAL  10 10\$  3800 2960 2100 1400 1010 797 717	R INDICA: R INDICA: EARS, AN BILITY,  25 4%  4290 3410 2320 1520 1070 854	941-82 TED RECURD ANNUAL IN PERCEN 50 2\$ 4590 3700 2440 1590 1100 885	T 100 1%
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA  5 20  4760 305	CATED RENCE PROE	ECURRENCE BABILITY, 25 4% 7050	INTERVAL IN PERCE 50 2% 7970	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 7 15 30 60 90 90	DISCHA  E  2  50%  2460 1850 1420 992 761 591 592  OF RECOF	3330 2560 1880 1270 941 733 80 1941-8	CFS, FORL, IN YEE PROBAL  10 10\$ 3800 2960 2100 1400 1010 797 717	R INDICA: EARS, ANI BILITY,  25 4%  4290 3410 2320 1070 854 772	941-82 TED RECURD ANNUAL IN PERCEN 50 2\$ 4590 3700 2440 1590 1100 885	T 100 1%

172 119

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## 14202000 PUDDING RIVER AT AURORA, OR

LOCATION.--Lat 45°14'00", long 122°44'56", in SEt sec.12, T.4 S., R.1 W., Marion County, Hydrologic Unit 17090009, on upstream side of bridge on U.S. Highway 99E at Aurora, 0.9 mi upstream from Mill Creek, and at mile 8.1.

DRAINAGE AREA .-- 479 mi2.

4670

3410

2550

1980

1610

1350

943

630

373

185

102

82

69

56

PERIOD OF RECORD. -- October 1928 to September 1964.

GAGE.--Wire-weight gage read once daily. Datum of gage is 72.23 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1934, and June 1 to Sept. 30, 1961, staff or wire-weight gage at same site at datum 5.00 ft higher.

REMARKS.--Slight regulation at high stages by pumping plant at mouth of Little Pudding River and at times in summer, by mllls on tributaries. Small diversions above station.

COOPERATION. -- Gage-height record collected in cooperation with U.S. Weather Bureau.

AVERAGE DISCHARGE.--36 years, 1,217 ft<sup>3</sup>/s, 881,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,400 ft³/s Dec. 30, 1937, gage height, 29.5 ft, present datum, from graph based on gage readings, from rating curve extended above 16,000 ft³/s; minimum, 26 ft³/s Aug. 13, 14, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 30.0 ft, present datum, Jan. 7, 1923, discharge 27,900 ft<sup>3</sup>/s, from rating curve extended above 16,000 ft<sup>3</sup>/s.

	ONTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1929-64		MA				OF ANNU	AL LOW FL 1930-64	OW
				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	64	1774	340	360	1.06	2.3	1	49	38	33	29	25	
NOVEMBER	79	4643	1387	1056	.76	9.4	3	50	38	33	29	25	
DECEMBER	436	5704	2355	1365	. 58	16.0	7	51	40	35	31	28	
JANUARY	766	5722	2693	1428	.53	18.3	14	54	42	37	34	30	
FEBRUARY	832	5600	2642	1225	. 46	18.0	30	58	46	41	37	33	
MARCH	599	4235	2094	879	.42	14.3	60	70	57	51	47	44	
APRIL	456	3355	1563	745	.48	10.6	90	81	65	58	54	50	
MAY	242	2192	881	435	.49	6.0	120	110	83	72	64	57	
JUNE	158	1101	419	203	.48	2.9	183	249	179	150	129	109	
JULY AUGUST	67	364	151	67	-44	1.0							
NUGUS I SEPTEMBER	34	120	72 91	21 41	. 29	.5							
SEFIEMBER	41	213	91	41	. 45	•6							
ANNUAL	695	1980	1217	321	.26	100							
	UNSE		AN AE DE	CODD 102	0-64					DIAD AF I		AL HIGH FI	
		FOR INDI	CATED RE		29-64 INTERVAL IN PERCE		PERIOD	BASE	HARGE, IN	N CFS, FO	RECORD 1	1929-64 ATED RECUIND ANNUAL	RRENCE
		FOR INDI	CATED RE	CURRENCE	INTERVAL IN PERCE			BASE	HARGE, IN	N CFS, FO	RECORD 1	1929-64 ATED RECUI	RRENCE
YEARS,	AND ANNUA	FOR INDI	CATED RE	CURRENCE BABILITY,	INTERVAL IN PERCE	NT 	PERIOD (CON-	BASE	HARGE, IN	N CFS, FO	RECORD 1	1929-64 ATED RECUIND ANNUAL	RRENCE
YEARS,  1.25	AND ANNUA	FOR INDI	CATED RE	CURRENCE BABILITY,	INTERVAL IN PERCE	NT  100	PERIOD (CON- SECU-	BASI DISCI	HARGE, INTERN	N CFS, FO	RECORD 1	1929-64 ATED RECUI ND ANNUAL IN PERCEI	RRENCE
YEARS,  1.25	AND ANNUA 2 50%	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	NT  100	PERIOD (CON- SECU- TIVE	DISCH	HARGE, IN INTERN EXCEEDAN	N CFS, FO /AL, IN N NCE PROB	RECORD 1	ATED RECUIND ANNUAL IN PERCEI	RRENCE NT
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	10 10%	RECORD OR INDICA YEARS, AN ABILITY, 25 4%	1929-64 ATED RECUI ND ANNUAL IN PERCEI 50 2%	RRENCE NT
YEARS, 1.25 80% 5540	AND ANNUA 2 50%	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTER EXCEEDAN  5 20%	10 10 10 10 14300 12200	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4% 18300 14800	1929-64 ATED RECUI ND ANNUAL IN PERCEI 50 2% 21700 16800	RRENCE NT
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 7710 7270 6480	HARGE, IN INTERV EXCEEDAN  5 20%  11400 10200 8500	10 10 10% 14300 12200 9640	0R INDIC/ YEARS, AN ABILITY, 25 4% 18300 14800 10900	1929-64  ATED RECUI ND ANNUAL IN PERCEI  50 2\$  21700 16800 11700	RRENCE NT
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTER EXCEEDAN  5 20%	10 10 10 10 14300 12200	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4% 18300 14800	1929-64 ATED RECUI ND ANNUAL IN PERCEI 50 2% 21700 16800	RRENCE NT
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 2 50% 7710 7270 6480 5340 4180	HARGE, IN INTERIECT STATE STAT	10 10% 14300 12200 9640 7280 5820	OR INDICA YEARS, AN ABILITY, 25 4% 18300 14800 10900 7870 6390	1929-64 ATED RECUIND ANNUAL IN PERCEI	RRENCE NT
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 2 50% 7710 7270 6480 5340 4180 3200	HARGE, IN INTERN EXCEEDAN 11400 10200 8500 6660 5260 4110	10 10 10 10 14300 12200 9640 7280	RECORD 1 OR INDIC/ YEARS, AM ABILITY, 25 4% 18300 14800 10900 7870	1929-64  ATED RECUIND ANNUAL IN PERCEI  50 2%  21700 16800 11700 8190 6740 5700	RRENCE NT
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI	CATED RE INCE PROE	CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 2 50% 7710 7270 6480 5340 4180	HARGE, IN INTERIECT STATE STAT	10 10% 14300 12200 9640 7280 5820	OR INDICA YEARS, AN ABILITY, 25 4% 18300 14800 10900 7870 6390	1929-64 ATED RECUIND ANNUAL IN PERCEI	100 1%
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI	CATED REINCE PROBLEM	CURRENCE ABILITY, 25 4% 9600 2	FINTERVAL IN PERCE 50 2% 23200	100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	7710 7270 6480 5340 4180 3200 2870	HARGE, IN INTERN EXCEEDAN 11400 10200 8500 4110 3660	10% 14300 12200 9640 7280 5820 4650 4110	DR INDIC/ YEARS, AN ABILITY, 25 4% 18300 14800 10900 7870 6390 5270	1929-64  ATED RECUIND ANNUAL IN PERCEI  50 2%  21700 16800 11700 8190 6740 5700	100 1%
YEARS, 1.25 80% 5540	2 50% 8070	FOR INDI L EXCEEDA 5 20% 12100 1	CATED RE NICE PROE  10 103 5200 1	CURRENCE ABILITY, 25 4% 9600 2	FINTERVAL IN PERCE 50 2% 23200	100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 7710 7270 6480 5340 4180 3200 2870 OF RECC	HARGE, IN INTERNEXCEEDAN  11400 10200 8500 6660 5260 4110 3660 DRD 1929-	14300 12200 9640 7280 4650 4110	OR INDIC/ YEARS, AN ABILITY, 25 4\$ 18300 10900 7870 6390 5270 4630	1929-64  ATED RECUIND ANNUAL IN PERCEI  50 2%  21700 16800 11700 8190 6740 5700	100 1%

# 14202500 TUALATIN RIVER NEAR GASTON, OR

LOCATION.--Lat 45°26'11", long 123°10'07", in SE¢SW¢ sec.34, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on right bank 1.5 ml west of Gaston, and at mile 63.9.

DRAINAGE AREA .-- 48.5 mi2.

PERIOD OF RECORD.--October 1940 to September 1956, October 1972 to September 1976, October 1978 to September 1978 in reports of Oregon Water Resources Department. Prior to October 1973 published as "at Gaston."

GAGE.--Water-stage recorder. Altitude of gage is 170 ft, by barometer. Prior to May 20, 1942, water-stage recorder at site 1.5 mi downstream at datum 164.18 ft National Geodetic Vertical Datum of 1929. May 20, 1942, to Sept. 30, 1956, nonrecording gage at present site at different datum.

REMARKS.--Slight diurnal fluctuation caused by logponds upstream. Small diversions for irrigation above station. In 1949, city of Hillsboro began diverting about 5 ft<sup>3</sup>/s for municipal supply. Some water is diverted from Roaring Creek upstream for Forest Grove municipal supply.

AVERAGE DISCHARGE.--24 years (water years 1941-56, 1973-76, 1979-82), 197 ft<sup>3</sup>/s, 55.16 in/yr, 142,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft<sup>3</sup>/s Dec. 21, 1955, gage height, 13.18 ft, site and datum then in use; minimum, 0.20 ft<sup>3</sup>/s Sept. 22, 23, 1951, Aug. 14, 15, Sept. 25, Oct. 8, 1952.

#### STATISTICAL SUMMARIES (BEFORE MUNICIPAL DIVERSIONS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-50

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-50 119

		60 k V 1 ku 1 ku	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAF CE PROBAE	RS, AND A	NNUAL NO	DN-
ONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100
CTOBER	18	244	 56	68	1.22	2.5	1						
OVEMBER	96	528	254	140	.55	11.2	3				'		
ECEMBER	102	672	425	202	.48	18.8	7						
ANUARY	138	542	351	131	• 37	15.5	14						
EBRUARY	193	827	485	212	.44	21.4	30						
ARCH	107	594	300	153	.51	13.3	60						_
PRIL	82	300	184	80	.44	8.1	90						
AY	48	239	102	54	.53	4.5	120						_
JNE	33	64	49	11	.23	2.2	183						
		35	25	6.5		1.1							
ULY	15							F00 TIL	W 40 VE4	RS OF DAT		DIE	
	15 8.9	21	16	4.0	.26	•7	NOTE: L	_E33 IHA	N IO YEA	KS OF DAI	A AVAILA	DLE.	
JGUST			16 18	4.0 11	.26 .61	.7 .8	NOTE: I	_E35 IMA	N JO YEA	KS OF DAT	A AVAILA	DLE.	
ULY UGUST EPTEMBER NNUAL MAGN I 1	8.9 4.7 119 FUDE AND	21 41 239 	18 187 	11 46 	.61 .25 OUS PEAK F	100			AND PROB	ABILITY C	F ANNUAL	HIGH F	
UGUST EPTEMBER NNUAL MAGNIT	8.9 4.7 119 FUDE AND BASE	21 41 239 PROBABILI D ON PERIO	187 TY OF INDO OF RECATED RE	46  STANTANE CORD 194  CURRENCE	.61 .25 OUS PEAK F	.8 100  FLOW 		GNITUDE BASE DISCH	AND PROB D ON PER ARGE, IN INTERV	ABILITY C	OF ANNUAL CORD 19	HIGH FI 41-50 ED RECUF	RENCE
UGUST EPTEMBER NNUAL MAGNIT	8.9 4.7 119 FUDE AND BASE IN CFS,	21 41 239 PROBABILI D ON PERIO FOR INDIC L EXCEEDAI	18  187  TY OF IND OF RECATED RECE PROBLEM	11 46 ASTANTANE CORD 194 CCURRENCE BABILITY,	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN NT	PERIOD (CON- SECU-	GNITUDE BASE DISCH	AND PROB D ON PER ARGE, IN INTERV	ABILITY COLOR OF RECORDS ABILITY COLOR OF ABILITY	OF ANNUAL CORD 19 R INDICAT ARS, AND	HIGH FI 41-50 ED RECUF ANNUAL N PERCEN	RRENCE
UGUST EPTEMBER NNUAL MAGNIT	8.9 4.7 119 FUDE AND BASE IN CFS,	21 41 239 PROBABILI D ON PERIO	18  187  TY OF INDOD OF RECATED RECE PROBLEM	46  ISTANTANE CORD 194  CURRENCE BABILITY,	.61 .25 OUS PEAK F 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN	MA(	GNITUDE BASE DISCH	AND PROB D ON PER ARGE, IN INTERV	ABILITY COLOR OF RECORD OF SERVICE CFS, FOR AL, IN YE	OF ANNUAL CORD 19	HIGH FI 41-50 ED RECUF	RRENCE
JGUST EPTEMBER NNUAL MAGNIT	8.9 4.7 119 FUDE AND BASE IN CFS,	21 41 239 PROBABILI D ON PERIO FOR INDIC L EXCEEDAI	187  TY OF INDO OF RE  CATED RE  NCE PROE	11 46 ASTANTANE CORD 194 CCURRENCE BABILITY,	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	GNITUDE BASE DISCH	AND PROB D ON PER ARGE, IN INTERV EXCEEDAN 5 20\$	ABILITY C IOD OF RE CFS, FOR AL, IN YE CE PROBAE 10 10%	OF ANNUAL CORD 19 : INDICAT ARS, AND SILITY, I 25 4%	HIGH FI 41-50 ED RECUI ANNUAL N PERCEN 50 2%	100
JGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	8.9 4.7 119  FUDE AND BASE IN CFS, AND ANNUA 2 50%	21 41 239 PROBABILI D ON PERIO FOR INDIC EXCEEDAN	187  TY OF INDO OF RE CATED RE NCE PROE	11 46 ASTANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	GNITUDE BASE DISCH	AND PROB D ON PER ARGE, IN INTERV EXCEEDAN 5 20\$	ABILITY COLOR OF REAL, IN YECE PROBABLE 10 10\$	DF ANNUAL CORD 19 R INDICAT ARS, AND BILITY, I	HIGH FI 41-50 ED RECUF ANNUAL N PERCEN	100
JGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	8.9 4.7 119  FUDE AND BASE IN CFS, AND ANNUA 2 50%	21 41 239 PROBABILI D ON PERIO FOR INDIC L EXCEEDAI	187  TY OF INDO OF RE CATED RE NCE PROE	11 46 ASTANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISCH DISCH 2 50% 2100 1570	AND PROB D ON PER ARGE, IN INTERV EXCEEDAN 5 20\$	ABILITY COLOR OF RECEPTOR OF STATE OF S	of ANNUAL CORD 19 NINDICAT ARS, AND BILITY, 1	HIGH FI 41-50 ED RECUF ANNUAL N PERCEN 50 2%	100
JGUST EPTEMBER NNUAL  MAGNIT  SCHARGE, YEARS, A  1.25 80%	8.9 4.7 119  FUDE AND BASE IN CFS, AND ANNUA 2 50%	21 41 239 PROBABILI D ON PERIO FOR INDIC EXCEEDAN	187  TY OF INDO OF RE CATED RE NCE PROE	11 46 ASTANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISCH  2 50%  2100 1570 1200	AND PROB D ON PER ARGE, IN INTERV EXCEEDAN 5 20\$	ABILITY COLOR OF RECEPTOR OF STATE OF S	OF ANNUAL CORD 19 : INDICAT ARS, AND SILITY, I 25 4%	HIGH FI 41-50 ED RECUI ANNUAL N PERCEN 50 2%	100
JGUST EPTEMBER NNUAL  MAGNIT  SCHARGE, YEARS, A  1.25 80%	8.9 4.7 119  FUDE AND BASE IN CFS, AND ANNUA 2 50%	21 41 239 PROBABILI D ON PERIO FOR INDIC EXCEEDAN	187  TY OF INDO OF RE CATED RE NCE PROE	11 46 ASTANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  2100 1570 1200 893	AND PROB D ON PER ARGE, IN INTERV EXCEEDAN 5 20\$ 2660 1960 1510 1120	ABILITY C IOD OF RE CFS, FOR AL, IN YE CE PROBABE 10 10% 3080 2210 1680 1230	of ANNUAL CORD 19 NINDICAT ARS, AND BILITY, 1	HIGH FI 41-50 ED RECUF ANNUAL N PERCEN 50 2%	100
JGUST EPTEMBER NNUAL  MAGNIT  SCHARGE, YEARS, A  1.25 80%	8.9 4.7 119  FUDE AND BASE IN CFS, AND ANNUA 2 50%	21 41 239 PROBABILI D ON PERIO FOR INDIC EXCEEDAN	187  TY OF INDO OF RE CATED RE NCE PROE	11 46 ASTANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15	DISCH  2 50%  2100 1570 1200 893 655	AND PROB D ON PER ARGE, IN INTERV EXCEEDAN 5 20\$ 2660 1960 1910 1120 840	ABILITY COLOR OF REAL, IN YEAR OF ROBARE 10 10 \$ 3080 2210 1680 1230 927	of ANNUAL CORD 19 NINDICAT ARS, AND BILITY, 1	HIGH FI 41-50 ED RECUF ANNUAL N PERCEN 50 2%	100
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	8.9 4.7 119  FUDE AND BASE IN CFS, AND ANNUA 2 50%	21 41 239 PROBABILI D ON PERIO FOR INDIC EXCEEDAN	187  TY OF INDO OF RE CATED RE NCE PROE	11 46 ASTANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	.61 .25 OUS PEAK 1 1-82 INTERVAL, IN PERCEN	.8 100 FLOW , IN	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  2100 1570 1200 893	AND PROB D ON PER ARGE, IN INTERV EXCEEDAN 5 20\$ 2660 1960 1510 1120	ABILITY C IOD OF RE CFS, FOR AL, IN YE CE PROBABE 10 10% 3080 2210 1680 1230	of ANNUAL CORD 19 NINDICAT ARS, AND BILITY, 1	HIGH FI 41-50 ED RECUF ANNUAL N PERCEN 50 2%	RENCE

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	T OF TIM	1E		
55	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95 <b>%</b>
711	479	349	280	231	186	124	83	53	33	26	21	18	15	13

## 14202500 TUALATIN RIVER NEAR GASTON, OR--Continued

## STATISTICAL SUMMARIES (AFTER MUNICIPAL DIVERSIONS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1951-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1952-82

	M 1 M 1 M 2 M 2	MANIMA	14F 4 13	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	ſ	NTERVAL,	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	) <b>N</b> -
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	2.2	146	 55	47	.85	2.2	1	4.0	.9	.4	.2		
NOVEMBER	8.5	642	236	194	.82	9.6	3	4.2	1.1	.5	.2		
DECEMBER	168	843	488	211	.43	19.9	7	5.0	1.6	.8	. 4		
JANUARY	115	871	518	248	. 48	21.1	14	6.5	2.6	1.4	.8		
EBRUARY	140	842	436	166	. 38	17.7	30	8.8	3.9	2.2	1.2		
MARCH	134	677	336	133	.40	13.7	60	12	5.7	3.5	2.2		
APRIL	110	374	217	81	.37	8.8	90	14	7.2	4.5	2.9		
YAM	42	154	86	35	.40	3.5	120	19	10	6.8	4.5		
JUNE	18	87	39	18	. 45	1.6	183	35	22	16	11		
JULY	9.5	32	18	5.9	.33	•7							
AUGUST	2.5	37	14	8.9	•62	•6							
SEPTEMBER	2.1	31	14	8.0	•56	•6							
ANNUAL	117	315	204	62	.30	100							
OISCHARGE,	BASE IN CFS,		OD OF RE	CORD 195	1-82  I NTERVAL	 , IN		BASED	ON PERI	OD OF R	OF ANNUAL ECORD 19 R INDICATI	51-82  ED RECUR	
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	D ON PERI	OD OF RE	CORD 195	1-82 INTERVAL IN PERCE	 , IN	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	CFS, FOI	ECORD 19	51-82  ED RECUR ANNUAL	RENCE
OISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD 195 CURRENCE	1-82 INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	DISCHA	ON PERI	CFS, FOI	ECORD 19 R INDICATI EARS, AND BILITY, II	51-82  ED RECUR ANNUAL N PERCEN	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU-	BASED DISCHA E	ON PERI	CFS, FOI	ECORD 19 R INDICATI EARS, AND BILITY, I	51-82 ED RECUR ANNUAL N PERCEN	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	RGE, IN INTERVA XCEEDANC 5 20%	CFS, FOI L, IN YI E PROBAI	ECORD 19 R INDICATI EARS, AND BILITY, II	51-82  ED RECUR ANNUAL N PERCEN	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	RGE, IN INTERVA XCEEDANC	CFS, FOILL, IN YILL PROBAL	ECORD 19  R INDICATI EARS, AND BILITY, II  25 4%  3510	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  2010 1610	RGE, IN INTERVACEEDANC	CFS, FOI L, IN YI E PROBAI 10 10%	R INDICATI EARS, AND BILITY, II 25 4%	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	ON PERI RGE, IN INTERVA XCEEDANG 5 20% 2570 2050 1510	CFS, FOILL, IN YILL PROBAL	ECORD 19  R INDICATI EARS, AND BILITY, II  25 4%  3510	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  2010 1610 1250	RGE, IN INTERVACEEDANC	CFS, FOI LL, IN YI E PROBAI 10 10%	ECORD 19  R INDICATI EARS, AND BILITY, II  25  4%  3510 2680 1750	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  E 2 50%  2010 1610 1250 925	0 N PERI RGE, IN INTERVA XCEEDANG 5 20% 2570 2050 1510 1130	CFS, FOI LL, IN YI E PROBAI 10 10% 2970 2330 1630 1230	ECORD 19  R INDICATI EARS, AND BILITY, II  25  4\$  3510 2680 1750 1340	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 195 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  2010 1610 1250 925 692	ON PERIOR OF THE	CFS, FOI LL, IN YI E PROBAI 10 10\$ 2970 2330 1630 1230 972	R INDICATI EARS, AND BILITY, II 25 4% 3510 2680 1750 1340 1110	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	CATED RENCE PROB	CORD 195 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCHA  E 2 50  2010 1610 1250 925 692 549 498  OF RECOR	ON PERI	CFS, FOI LL, IN YILE PROBAI 10 10 2330 1630 1230 972 826 745	R INDICATI EARS, AND BILITY, II 25 4% 3510 2680 1750 1110 959 855	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDI	CATED RENCE PROB	CURRENCE ABILITY,  25 4%  N TABLE (  CFS, WHIC	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  EXCEEDED FOR	DISCHA  E 2 50\$  2010 1610 1250 925 692 549 498  OF RECOR	2570 2050 1130 864 718 652 D 1951-8	2970 2330 1630 1230 1230 1230 1230 1230 1230 1230 12	R INDICATI EARS, AND BILITY, II 25 4% 3510 2680 1750 1340 1110 959 855	ED RECUF ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDIIL EXCEEDA	DD OF RECOMMENDED OF REPORTS OF RECOMMENDED OF RECO	CORD 195 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCHA  E 2 50  2010 1610 1250 925 692 549 498  OF RECOR	ON PERI	CFS, FOI LL, IN YILE PROBAI 10 10 2330 1630 1230 972 826 745	R INDICATI EARS, AND BILITY, II 25 4% 3510 2680 1750 1110 959 855	51-82 ED RECUR ANNUAL N PERCEN 50 2%	RRENCE

## 14203000 SCOGGINS CREEK NEAR GASTON, OR

LOCATION.--Lat 45°27'32", long 123°09'16", on line between secs. 26 and 27, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 100 ft upstream from bridge on State Highway 47, 1.7 mi northwest of Gaston, and at mile 1.7.

DRAINAGE AREA. -- 43.3 mi<sup>2</sup>.

PERIOD OF RECORD. --October 1940 to September 1974. Prior to October 1973, published as "Scoggin Creek near Gaston."

GAGE.--Water-stage recorder. Datum of gage is 168.92 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1947, water-stage recorder at site 300 ft upstream at same datum. Oct. 1, 1947, to June 7, 1950, nonrecording gage at site 150 ft upstream at same datum.

REMARKS.——Some diurnal fluctuation caused by logponds above station. Diversions by pumping for irrigation above station. Part of domestic water supply for Hillsboro is diverted from Sain Creek above station.

AVERAGE DISCHARGE. -- 34 years. 143 ft<sup>3</sup>/s. 44.85 in/yr, 103,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft<sup>3</sup>/s Dec. 21, 1955, gage height, 15.94 ft; minimum, 0.10 ft<sup>3</sup>/s Aug. 28, Sept. 30, Oct. 1, 3, 1958, Aug. 23, 24, 1961.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-74 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-74

	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	H	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NOI	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	5.2	139	27	27	1.00	1.6	1	1.5	.5	.3	.2	.1	
NOVEMBER	11	432	155	111	.72	9.0	3	2.1	.9	.6	.4	.2	
DECEMBER	51	655	322	157	.49	18.6	7	3.1	1.6	1.1	.8⁻	.5	
JANUARY	90	675	364	177	.49	21.1	14	3.8	2.2	1.5	1.1	.7	
FEBRUARY	115	660	333	140	.42	19.3	30	4.6	2.7	2.0	1.5	1.1	
MARCH	74	499	259	118	.46	15.0	60	5.7	3.6	2.8	2.3	1.8	
APRIL	54	269	144	59	-41	8.3	90	7.1	4.8	3.8	3.2	2.5	
MAY	35	167	68	31	.46	3.9	120	9.5	6.7	5.5	4.6	3.8	
JUNE	14	54	30	10	.34	1.7	183	20	15	13	11	9.3	
JULY	4.1	23	13	4.7	.38	.7							
AUGUST	1.0	15	6.4	3.3	.50	.4							
SEPTEMBER	2.1	16	7.5	3.8	.50	.4							
ANNUAL	72	225	143	36	. 25	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-74

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-74 121

OISCHARGE, YEARS, A					CE INTER Y, IN PE		PERIOD (CON-		INTERV	'AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20% 	10 10% 	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1290	1770	2580	3220	4170	4980								
							1	1460	1940	2290	2770	3150	
WEIGHTED	SKEW =	.641					3	1140	1490	1740	2100	2390	
							7	904	1130	1250	1400	1490	
							15	721	875	939	994	1020	
							30	539	654	706	753	778	
							60	425	530	583	636	668	
							90	375	464	508	55 <b>1</b>	577	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-74

_			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCE	NT OF TIME	=		
_	5% 	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	576	394	<b>2</b> 88	223	180	148	95	58	32	18	13	9.8		5.3	3.5

### 14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION.--Lat 45°28'30", long 123°07'23", in NE±NW± sec.24, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 5 ft upstream from highway bridge, 1.0 mi south of Dilley, 1.2 mi downstream from Scoggins Creek, and at mile 58.81.

DRAINAGE AREA .-- 125 mi2.

PERIOD OF RECORD.--October 1939 to September 1982. Prior to October 1940 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 147.57 ft National Geodetic Vertical Datum of 1929. Prior to June 16, 1950, nonrecording gage at several sites within 200 ft of present site at datum 4.00 ft higher. June 16, 1950, to Aug. 10, 1966, water-stage recorder at present site at datum 4.00 ft higher.

REMARKS.--Diurnal fluctuation caused by operation of millpond on Scoggins Creek above station and regulation by Henry Hagg Lake since
January 1975. Diversions above station of approximately 3,000 acre-ft from J.W. Barney Reservoir on the Middle Fork of North Fork
Trask River for municipal water supply and irrigation in Wapato Lake area.

AVERAGE DISCHARGE.--43 years, 401 ft3/s, 290,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.34 ft, from rating curve extended above 6,000 ft<sup>3</sup>/s; minimum, 0.08 ft<sup>3</sup>/s Sept. 3, 1967.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1940-74 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-74

	MINIMUM	MAYIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON-	11	NTEŔVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	5.5	353	80	75	.93	1.6	1	3.6	1.0	.5	.2	.1	
NOVEMBER	19	1709	441	355	.80	8.8	3	5.0	1.7	.8	.5	.2	
DECEMBER	156	2228	962	512	.53	19.2	7	6.4	2.7	1.5	.9	.5	
JANUARY	277	2497	1069	564	.53	21.3	14	8.0	3.5	2.0	1.2	.7	
FEBRUARY	284	1922	989	404	.41	19.7	30	10	4.6	2.7	1.6	.9	
MARCH	219	1406	733	339	.46	14.6	60	14	7.0	4.4	2.9	1.7	
APRIL	143	769	412	179	.43	8.2	90	17	9.7	6.8	4.9	3.2	
MAY	88	437	185	88	.48	3.7	120	24	15	11	9.0	6.7	
JUNE	39	132	76	25	.33	1.5	183	56	39	31	25	20	
JULY	6.1	49	28	12	.44	` <b>.</b> 5							
AUGUST	.9	40	16	9.3	- 59	.3							
SEPTEMBER	1.8	60	21	13	•63	.4							
ANNUAL	216	839	417	117	•28	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-74 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-74

DISCHARGE, YEARS, A					NCE INTER		PERIOD (CON-	DISCH	INTERV	'AL, ÎN Y	EARS, A	ATED RECUI	
1.25 80%	2 50%	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
3530	5000	7540	9600	12700	15400								
							1	4270	6050	7460	9500	11200	
WEIGHTED	SKEW =	• 599					3	3340	4700	5830	7540	9060	
							7	2600	3580	4270	5200	5930	
							15	2090	2720	3040	3380	3580	
							30	1570	2010	2240	2480	2630	
							60	1230	1580	1790	2020	2170	
							90	1080	1390	1570	1770	1900	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-74

		DISCHA	RGE, IN	CFS, WH	ICH WAS	EQUALED C	R EXCEEDE	D FOR IN	NDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1740 1	140	852	659	536	428	275	157	86	46	33	24	18	13	6.9

## 14204000 GALES CREEK NEAR GALES CREEK, OR

LOCATION.--Lat 45°38'30", long 123°15'55", in NW\SE\ sec.23, T.2 N., R.5 W., Washington County, Hydrologic Unit 17090010, on right bank 0.5 mi downstream from Beaver Creek, 4.6 mi northwest of town of Gales Creek, and at mile 17.5.

DRAINAGE AREA .-- 33.2 mi2.

448

295

221

173

111

136

70

46

28

17

14

11

9.0

7.9

6.3

PERIOD OF RECORD.--October 1935 to September 1945, October 1963 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 449.31 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 3, 1964, nonrecording gage at same site and datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--17 years, 115  $ft^3/s$ , 47.04 in/yr, 83,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,970 ft $^3$ /s Dec. 22, 1964, gage height, 8.63 ft; minimum, 1.7 ft $^3$ /s Sept. 28, 1967.

M	ONTHLY AN	ID ANNUAL I	MEAN DISC	CHARGES	1936-70		MA				F ANNUAL CORD 19		W
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	Į.	NTERVAL,	IN YEAR	INDICATI	NNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL	8.0 8.2 43 59 105 70 48 23 16 9.4 4.5 3.4	54 298 551 614 496 359 275 107 52 27 15 25	19 98 251 312 271 207 113 55 29 15 9.2 9.5	12 92 158 161 105 95 61 20 11 5.1 3.1	.66 .94 .63 .52 .39 .46 .54 .36 .37 .34 .33	1.3 7.1 18.1 22.5 19.5 14.9 8.1 3.9 2.1 1.1 .7 .7	1 3 7 14 30 60 90 120 183	4.6 5.6 6.2 6.6 7.1 8.0 8.9 10	3.1 3.9 4.4 4.8 5.2 6.0 6.9 8.2	2.5 3.1 3.5 3.9 4.3 5.1 6.0 7.3	2.1 2.6 2.9 3.2 3.6 4.4 5.4 6.8	      	
		PROBABILITE				-LOW	MA(				F ANNUAL CORD 19:		.OW
MAGNI'	BASE , IN CFS,		OD OF REC	CORD 1936	5-70 INTERVAL,	, IN	PERIOD (CON-	BASED  DISCHA	ON PERI  RGE, IN INTERVA	OD OF RE		36-70  ED RECUF ANNUAL	RENCE
MAGNI'	BASE , IN CFS,	D ON PERIO	OD OF REC	CORD 1936	INTERVAL,	, IN	PERIOD	BASED  DISCHA	ON PERI  RGE, IN INTERVA	OD OF RE	CORD 193	36-70  ED RECUF ANNUAL	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA	FOR INDICAL EXCEEDA	DD OF REC	CORD 1936 CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASED DISCHA E2	ON PERI  RGE, IN INTERVA XCEEDANC	OD OF RE  CFS, FOR L, IN YE E PROBAB	CORD 19:	36-70 ED RECUF ANNUAL N PERCEN	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAL  5 20%	CATED REC	CURRENCE ABILITY, 25 4%	5-70 INTERVAL, IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASED DISCHA  E 2 50%  1580 1210 869 650 467 373 325	ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10\$  2560 1920 1270 890 613 460 397	2970 2240 1410 947 653 477	B6-70  ED RECUF ANNUAL N PERCEN  50 2%	100 1%
MAGNITOLISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAN	CATED RECONCE PROBA	CURRENCE ABILITY,  25 4%	5-70 INTERVAL, IN PERCEI 50 2%	IN NT 1000 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1580 1210 869 650 467 373 325  OF RECOR	ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10 10 12 2560 1920 1270 890 613 460 397	2970 2240 1410 947 653 477 411	B6-70  ED RECUF ANNUAL N PERCEN  50 2%	100 1%

#### 14204500 GALES CREEK NEAR FOREST GROVE, OR

LOCATION.--Lat 45°33'20", long 123°11'10", in SE½ sec.21, T.1 N., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 50 ft downstream from Roderick road bridge, 0.1 mi below Kelly Creek, 2.5 mi southeast of town of Gales Creek, 4.5 mi northwest of Forest Grove, and at mile 8.7.

DRAINAGE AREA .-- 66.1 mi2.

PERIOD OF RECORD. -- October 1940 to September 1956, October 1970 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 201.81 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1941, at site 1.4 mi downstream at datum 14.33 ft lower. Sept. 13, 1941, to June 19, 1952, at downstream side of bridge at datum 1.44 ft higher. June 20, 1952, to Jan. 3, 1956, at datum 1.00 ft higher.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 225 ft<sup>3</sup>/s, 46.23 in/yr, 163,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,410 ft<sup>3</sup>/s Feb. 17, 1949, gage height, 10.90 ft, from floodmark, site and datum then in use; maximum gage height, 12.95 ft, from floodmark, Jan. 21, 1972; minimum discharge, 1 ft<sup>3</sup>/s Aug. 19, 1947.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-81 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-81

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	7.3	198	44	43	.97	1.6	1	7.7	4.8	3.6	2.8	2.1	
NOVEMBER	18	718	245	186	.76	9.0	3	8.2	5.3	4.1	3.3	2.5	
DECEMBER	27	1080	531	275	.52	19.5	7	8.8	5.8	4.5	3.7	2.8	
JANUARY	27	1152	560	310	.55	20.6	14	9.5	6.5	5.2	4.2	3.4	
FEBRUARY	62	1106	531	241	.45	19.5	30	11	7.4	6.0	5.1	4.1	
MARCH	124	904	396	201	.51	14.6	60	13	9.1	7.5	6.3	5.2	
APRIL	73	398	213	91	.43	7.8	90	14	11	9.2	8.0	6.9	
YAY	45	252	99	43	.43	3.6	120	18	13	11	9.9	8.3	
JUNE	29	82	47	13	.29	1.7	183	33	24	21	18	15	
JULY	7.5	33	22	6.8	•31	•8							
AUGUST	4.9	22	14	4.4	.31	.5							
SEPTEMBER	6.8	31	16	6.1	•39	•6							
ANNUAL	52	383	225	76	.34	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-81

YEARS, A							PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20%	10 10 <b>%</b>	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
2110	3170	4680	5700	6990	7950								
							1	2500	3470	4040	4710	5170	
WE I GHTED	SKEW =	<b></b> 165					3	1970	2720	3160	3670	4030	
							7	1510	1990	2240	2480	2620	
							15	1150	1460	1590	1700	1760	
							30	846	1080	1180	1280	1330	
							60	674	872	963	1050	1090	
							90	605	775	843	896	922	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-81

			DISCH	ARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	892	609	449	351	279	220	136	83	47	28	23	19	16	12	8.9

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

125

### 14205500 EAST FORK DAIRY CREEK AT MOUNTAINDALE, OR

LOCATION.--Lat 45°38'05", long 123°02'35", in NE‡NW‡ sec.27, T.2 N., R.3 W., Washington County, Hydrologic Unit 17090010, on left bank at dam site 0.7 mi northwest of village of Mountaindale.

DRAINAGE AREA.--43.0 mi<sup>2</sup>, including two small streams on left bank which enter creek below station.

PERIOD OF RECORD.--October 1940 to September 1951.

GAGE..-Water-stage recorder. Datum of gage is 183.55 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records include measured or estimated discharge of two small streams which flow through dam site at station and enter creek from left bank about a mile below station. Diurnal fluctuation at low stages caused by logpond upstream. Probably some pumping for irrigation above station.

AVERAGE DISCHARGE.--11 years (water years 1941-51), 107 ft3/s, 77,460 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1041-51

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,420 ft<sup>3</sup>/s Feb. 17, 1949, gage height, 12.54 ft; minimum, 7 ft<sup>3</sup>/s Sept. 10-12, 1944.

### STATISTICAL SUMMARIES

					COEFFI- CIENT OF	OF	PERIOD (CON-		ARGE, IN INTERVAL, EXCEEDANC	IN YEARS	, AND AN	INUAL NO	)N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	10	67	23	17	.71	1.8	1	10	9.1	8.2	7.5		
OVEMBER	26	179	103	61	.59	7.9	3	10	9.1	8.3	7.7		
DECEMBER	33	325	206	104	•50	15.8	7	11	9.2	8.5	8.0		
JANUARY	102	414	218	103	.47	16.7	14	11	9.7	9.1	8.6		
FEBRUARY	94	584	306	140	.46	23.5	30	11	10	10.0	9.6		
MARCH	63	436	191	108	•57	14.7	60	12	11	11	10		
APRIL	51	198	110	51	.46	8.5	90	14	12	12	11		
4AY	37	153	63	31	.49	4.8	120	16	14	13	12		
JUNE	26	54	35	8.8	. 25	2.7	183	24	20	18	17		
JULY	15	27	20	4.1	-21	1.5							
AUGUST	9.8	18	13	2.2	.16	1.0							
SEPTEMBER	10.0	18	13	2.1	.17	1.0							
* • • • • • •													
ANNUAL 	59 	151	107	30	.28	100							
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDI	TY OF IN OD OF RE CATED RE	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK I I-51 INTERVAL IN PERCEI	FLOW , IN	PERIOD (CON-	BASE DISCH	AND PROBAD ON PERI	OD OF REC  CFS, FOR L, IN YEA	ORD 194 INDICATE RS, AND	1-51 D RECUR	RENCE
MAGNI'	TUDE AND BASE	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	STANTANEC CORD 1941	DUS PEAK (I-51 INTERVAL IN PERCEI	FLOW , IN	 PERIOD	BASE DISCH	O ON PERI ARGE, IN INTERVA	OD OF REC  CFS, FOR L, IN YEA	ORD 194 INDICATE RS, AND	1-51 D RECUR	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIV L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK (I-51 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	O ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF REC CFS, FOR L, IN YEA E PROBABI	ORD 194  INDICATE RS, AND LITY, IN  25	1-51 D RECUR ANNUAL I PERCEN	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK (I-51 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF REC	ORD 194  INDICATE RS, AND LITY, IN  25	1-51 D RECUR ANNUAL I PERCEN	RENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK (I-51 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF REC	ORD 194  INDICATE RS, AND LITY, IN  25 4%	D RECUF ANNUAL I PERCEN 50 2%	100 17
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK (I-51 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF REC	ORD 194INDICATE RS, AND LITY, IN 25 4%	D RECUF ANNUAL I PERCEN 50 2%	100 15
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK (I-51 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 1070 865	D ON PERI  ARGE, IN INTERVA EXCEEDANC  5 20%  1260 1070	OD OF REC CFS, FOR L, IN YEA E PROBABI 10 10%	ORD 194 INDICATE RS, AND LITY, IN 25 4%	D RECUF ANNUAL I PERCEN 50 2%	100 17
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK (I-51 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISCH  2 50%  1070 865 679	D ON PERI  ARGE, IN INTERVA EXCEEDANC  5 20%  1260 1070 840	OD OF REC CFS, FOR L, IN YEA E PROBABI 10 10%	ORD 194 INDICATE RS, AND LITY, IN 25 4%	D RECUF ANNUAL I PERCEN 50 2%	100 15

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-51

90

270

349

389

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME	:		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
408	277	207	160	128	107	74	51	34	22	19	15	14	13	11

## 14206000 MCKAY CREEK NEAR NORTH PLAINS, OR

LOCATION.--Lat 45°37'32", long 122°58'32", in SEt sec.30, T.2 N., R.2 W., Washington County, Hydrologic Unit 17090010, on downstream end of left timber bent of bridge on Shadybrook Road, 2.0 mi upstream from Jackson Creek, and 2.3 mi northeast of North Plains.

DRAINAGE AREA .-- 27.6 mi2.

WEIGHTED SKEW = .538

PERIOD OF RECORD.--October 1940 to September 1943, October 1948 to September 1956.

GAGE.--Water-stage recorder. Datum of gage is 172.57 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1940, to Sept. 30, 1943, at datum 0.25 ft higher.

REMARKS. -- Some diurnal fluctuation in summer caused by pumping for irrigation above station.

AVERAGE DISCHARGE.--11 years (water years 1941-43, 1949-56),  $70.7 ft^3/s$ , 51,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft<sup>3</sup>/s Feb. 17, 1949, gage height, 11.23 ft; maximum gage height, 11.35 ft Dec. 21, 1955; minimum discharge, 0.4 ft<sup>3</sup>/s Aug. 17, 18, 22, 1951.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-56 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-56

	***************************************	1444118114	MEAN	STAN- DARD DEVIA-	CIENT OF	OF	PERIOD (CON-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	)N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	2.3	29	10	8.5		1.2	1						
NOVEMBER	5.0	221	76	63	.83	8.9	3						
DECEMBER	27	307	177	82	.46	20.7	7						
IANUARY	56	318	176	85	.48	20.6	14						
EBRUARY	50	398	198	104	-53	23.1	30						
IARCH	29	248	114	69	.60	13.3	60						
PRIL	21	115	58	35	-61	6.7	90						
AY	12	43	24	9.5	.40	2.8	120						
UNE	6.3	23	12	5.6	.47	1.4	183						
ULY	2.6	8.2	5.0	1.8	.36	•6							
UGUST	1.6	4.5	3.2	.9	.28	.4	NOTE: L	ESS THA	N 10 YEA	RS OF DAT	TA AVAILA	BLE.	
EPTEMBER	2.4	5.5	3.3	1.0	.29	.4							
NNUAL	36	110	71	19	•27	100							
OISCHARGE	BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO	OD OF REC	CORD 194	1-56  INTERVAL	, IN	PERIOD	BASE D1SCH	D ON PER  ARGE, IN INTERV	ABILITY O LOD OF RE CFS, FOR AL, IN YE	CORD 19 R INDICAT	41-56 ED RECUR	RENCE
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE	2	5	10	25	50	100
737	936	1240	1450				DAYS) 	50 <b>%</b>  796	20 <b>%</b>  1040	10%  1220		2 <b>%</b> 	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-56

15

30

60

90

886

697

550

409

307

268

531

387

286

217

202

645

496

365

273

 		DISCH	IARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 319	208	143	103	77	58	35	20	12	6.6	5.2	4.3	3.5	2.9	2.3

## 14206500 TUALATIN RIVER AT FARMINGTON, OR

LOCATION.--Lat 45°26'50", long 122°56'58", in SEtSEt sec.29, T.1 S., R.2 W., Washington County, Hydrologic Unit 17090010, on left bank at Harris bridge at Farmington, 5.0 mi south of Hillsboro, and at mile 33.3.

DRAINAGE AREA .-- 568 mi2.

PERIOD OF RECORD. --October 1939 to September 1958. October 1972 to September 1976 (October, May to September only, each year).

GAGE.--Water-stage recorder. Datum of gage is 100.42 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1940, nonrecording gage at same site at datum 2.00 ft higher. Oct. 1, 1940, to Sept. 30, 1958, nonrecording gage at present site and datum.

REMARKS.--Flow regulated by Henry Hagg Lake since January 1975.

AVERAGE DISCHARGE.--19 years (water years 1940-58), 1,355 ft<sup>3</sup>/s, 981,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge during period October 1939 to September 1958, 24,200 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 36.03 ft, from floodmark; no flow Aug. 4-7, Aug. 10 to Sept. 6, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1932, about 37 ft Dec. 22 or 23, 1933.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1940-58

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-58

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEARS CE PROBABI	, AND AN	INUAL NO	ON−
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	35	791	212	194	.92	1.3	1	28	14	8.9	5.8		
NOVEMBER	85	3177	1074	902	.84	6.5	3	30	15	9.4	6.1		
DECEMBER	337	7425	2929	1876	.64	17.9	7	32	16	11	7.0		
JANUARY	945	7017	3401	1866	.55	20.7	14	35	20	13	9.5		
FEBRUARY	1453	6603	3944	1571	.40	24.0	30	40	24	18	13		
MARCH	730	5172	2474	1244	•50	15.1	60	52	35	27	21		
APRIL	478	3135	1357	673	.50	8.3	90	64	43	34	27		
MAY	247	1544	565	299	.53	3.4	120	85	60	48	38		
JUNE	134	422	243	75	.31	1.5	183	168	122	100	84		
JULY	39	160	98	39	.40	•6							
AUGUST	.8	99	50	24	. 49	.3							
SEPTEMBER	25	118	62	28	• 45	. 4							
ANNUAL	651	2327	1355	416	.31	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1940-58

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1940-58 127

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY. I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
7050	10500	15100	18100	21800									
							1	10300	14100	16000	18000		
WEIGHTE	D SKEW =	275					3	9610	12600	14000	15300		
							7	8280	10500	11500	12300		
							15	6800	8550	9280	9890		
							30	5260	6830	7640	8460		
							60	4160	5440	6150	6930		
							90	3730	4860	5450	6050		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-58

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
 5 <b>%</b>	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60 <b>%</b>	70 <b>%</b>	75 <b>%</b>	80%	85 <b>%</b>	90%	95%
 5760	4090	3040	2340	1830	1410	796	433	240	138	101	79	64	51	32

### 14207500 TUALATIN RIVER AT WEST LINN, OR

LOCATION.--Lat 45°21'03", long 122°40'30", in SW½ sec.34, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 300 ft upstream from bridge on State Highway 212, 0.4 mi west of West Linn city limits, and at mile 1.8.

DRAINAGE AREA .-- 706 mi2.

PERIOD OF RECORD.--July 1928 to September 1982. Prior to October 1960, published as "near Willamette."

GAGE.--Water-stage recorder. Datum of gage is 85.61 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Prior to June 12, 1941, nonrecording gage at datum 1.02 ft higher.

REMARKS.--October 1951 to September 1970, all records published for this station included the daily flow of Oswego Canal. October 1971 to September 1982, maximum and average discharge only include flow in Oswego Canal. Oswego Canal diverts at point 5.0 mi above station for development of power between outlet of Lake Oswego and Willamette River. Some regulation in low-water season by flashboards on crest of diversion dam for Oswego Canal and regulation by Henry Hagg Lake since January 1975. Several diversions above station for irrigation.

AVERAGE DISCHARGE.--54 years, 1,530  ${\rm ft}^3/{\rm s}$ , 29.43 in/yr, 1,108,000 acre-ff/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 23,300 ft $^3$ /s Dec. 23, 1933, gage height, 17.72 ft; minimum daily, 0.20 ft $^3$ /s July 30 to Aug. 2, 1966.

### STATISTICAL SUMMARIES NOT ADJUSTED FOR DIVERSION

MONTHLY AND ANNUAL MEAN DISCHARGES 1929-51

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-51

		MAYIMIN	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	11	NTEŔVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	24	859	140	181	1.29	.9	1	8.9	5.3	4.1	3.3		
NOVEMBER	40	4121	1074	1076	1.00	6.5	3	9.1	5.6	4.4	3.7		
DECEMBER	272	7685	2843	2080	.73	17.3	7	10	6.5	5.2	4.4		
JANUARY	669	6459	3524	1898	.54	21.5	14	12	7.6	6.2	5.4		
FEBRUARY	1080	7092	3574	1558	.44	21.8	30	15	9.5	7.9	6.9		
MARCH	740	5382	2622	1276	. 49	16.0	60	22	15	13	11		
APRIL	506	3642	1593	917	.58	9.7	90	29	21	18	16		
MAY	175	1868	627	342	• 55	3.8	120	45	33	28	25		
JUNE	100	587	259	114	.44	1.6	183	137	94	76	62		
JULY	23	214	84	48	.58	.5							
AUGUST	7.7	63	26	15	.58	.2							
SEPTEMBER	8.5	92	33	26	•79	.2							
ANNUAL	671	2046	1356	453	.33	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1929-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1929-51

	•	•		RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	/AL, IN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
7000	10000	14700	18000	22600									
							1	9100	13400	16400	20500		
WEIGHTE	D SKEW =	• .176					3	8830	12800	15500	19100		
							7	8160	11300	13300	15800		
							15	6910	9100	10300	11600		
							30	5410	6930	7720	8540		
							60	4230	5440	6060	6690		
							90	3780	4910	5480	6040		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-51

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
<b>57</b> 50	4200	3200	2410	1810	1380	803	433	219	98	63	43	32	21	13

# 14207500 TUALATIN RIVER AT WEST LINN, OR--Continued STATISTICAL SUMMARIES ADJUSTED FOR DIVERSION

MONTHLY AND ANNUAL MEAN DISCHARGES 1952-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1953-70

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL,	, IN YEA	OR INDICAT ARS, AND A ABILITY, I	NNUAL NO	)N-
10NTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
CTOBER	9.2	574	178	169	.95	1.0	1	2.9	1.2	.7	.4		
IOVEMBER	87	3229	1064	880	.83	5.8	3	3.1	1.3	.7	.5		
DECEMBER	629	8476	3199	2033	.64	17.3	7	3.4	1.5	.9	•6		
IANUARY	1067	7802	4354	2180	.50	23.5	14	3.9	1.9	1.3	.9		
EBRUARY	1942	7410	4239	1587	.37	22.9	30	5.2	2.8	2.1	1.7		
1ARCH	990	6400	2812	1348	.48	15.2	60	8.6	4.7	3.6	3.0		
PRIL	450	3968	1619	818	.51	8.8	90	15	7.3	5.1	3.9		
MAY	276	1565	691	383	.55	3.7	120	31	16	11	8.7		
UNE	63	497	247	132	.53	1.3	183	134	83	64	51		
IULY	4.6	137	52	40	.78	.3							
UGUST	2.0	98	14	22	1.57	.1							
SEPTEMBER	3.9	155	30	36	1.19	.2							
NNUAL	1045	2538	1530	348	.23	100							
) I SCHARGE,	BASE	ON PERIO	OD OF RE	CORD  CURRENCE	OUS PEAK F	 , IN		BASED	ON PERI	CFS, FO	OF ANNUAL RECORD 19	52-70  ED RECUR	
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	 , IN	PERIOD (CON- SECU-	BASED  DISCHA	O ON PERI	CFS, FO	RECORD 19	52-70  ED RECUR ANNUAL	 RENCE
ISCHARGE, YEARS, A	BASE	FOR INDIC	OD OF RE	CORD CURRENCE	INTERVAL,	, IN NT	PERIOD (CON-	BASED  DISCHA	ON PERI	CFS, FO	RECORD 19	52-70  ED RECUR ANNUAL	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	O ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FO NL, IN Y DE PROBA 10	RECORD 19	52-70 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50\$	O ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FO NL, IN Y DE PROBA 10 10%	RECORD 19.  OR INDICATI FEARS, AND BILITY, II 25 4%	52-70 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
I SCHARGE, YEARS, A	BASE	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  10100 9810	O ON PERI	CFS, FO AL, IN Y CE PROBA 10 10%	RECORD 19.  PR INDICATI (FARS, AND BILITY, II  25 4%  18100 17200	52-70 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  10100 9810 9060	O ON PERI ARGE, IN INTERVA EXCEEDANCE 5 20% 13400 13000 11500	CFS, FO NL, IN Y EE PROBA 10 10% 15600 14900 12900	RECORD 19	52-70 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50≴ 10100 9810 9060 7790	5 20% 13400 11500 9700	CFS, FO CFS, FO LL, IN Y EE PROBA 10 10% 15600 14900 12900 10600	RECORD 19:  OR INDICATI (EARS, AND BILITY, II  25 4%  18100 17200 14400 11600	52-70  ED RECUR ANNUAL N PERCEN  50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCHA  2 50%  10100 9810 9060 7790 6380	13400 11500 17890 17890	CFS, FOUL, IN YEE PROBA-10 10 14900 14900 10600 8630	RECORD 19 RECORD	52-70 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  10100 9810 9060 7790 6380 4940	13400 13000 11500 9700 6320	CFS, FO CFS, FO LF, IN Y LE PROBA 10 10 15600 14900 12900 10600 8630 7080	RECORD 19:  RECORD	52-70  ED RECUR ANNUAL N PERCEN  50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCHA  2 50%  10100 9810 9060 7790 6380	13400 11500 17890 17890	CFS, FOUL, IN YEE PROBA-10 10 14900 14900 10600 8630	RECORD 19 RECORD	52-70  ED RECUR ANNUAL N PERCEN  50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIC EXCEEDAL	CATED RE	CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  10100 9810 9060 7790 6380 4940 4300	ARGE, IN INTERVA EXCEEDANC  13400 13000 11500 7890 6320 5350	CFS, FO NL, IN Y E PROBA 10 10% 15600 14900 12900 10600 8630 7080 5930	RECORD 19:  RECORD	52-70  ED RECUR ANNUAL N PERCEN  50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE	FOR INDIG	DOD OF RECEASED OF RECEASED RESIDENCE PROBLEM TO TH	CORD  CURRENCE ABILITY,  25 4%  N TABLE	INTERVAL IN PERCEN 50 2%	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  10100  9810  9060  7790  6380  4940  4300  OF RECOR	ARGE, IN INTERVALENCE DANCE   13400   13000   11500   9700   7890   6320   53550   20   1952-7	CFS, FO NL, IN Y E PROBA 10 10 10 12 15600 14900 10600 8630 7080 5930	RECORD 19:  OR INDICATI (EARS, AND BILITY, II  25 4%  18100 17200 14400 11600 9370 7920 6550	52-70  ED RECUR ANNUAL N PERCEN  50 2%	RENCE
YEARS, A	BASE	FOR INDIG	DOD OF RECEASED OF RECEASED RESIDENCE PROBLEM TO TH	CORD  CURRENCE ABILITY,  25 4%  N TABLE	INTERVAL IN PERCENTED TO THE PERCENT OF DAILY N	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD  EXCEEDED FO	DISCHA  E  2  50%  10100  9810  9060  7790  6380  4940  4300  OF RECOR	ARGE, IN INTERVALENCE DANCE   13400   13000   11500   9700   7890   6320   53550   20   1952-7	CFS, FO NL, IN Y E PROBA 10 10 10 12 15600 14900 10600 8630 7080 5930	RECORD 19:  OR INDICATI (EARS, AND BILITY, II  25 4%  18100 17200 14400 11600 9370 7920 6550	52-70  ED RECUR ANNUAL N PERCEN  50 2%	RENCE

### 14208000 CLACKAMAS RIVER AT BIG BOTTOM, OR

LOCATION.--Lat 45°01'00", long 121°55'10", in NW±SE± sec.26, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank at lower end of Big Bottom, 0.5 mi downstream from Pot Creek, 28 mi southeast of Estacada, and at mile 65.1.

DRAINAGE AREA .-- 136 m12.

PERIOD OF RECORD. --April 1920 to September 1970. Monthly discharge only April 1920 published in WSP 1318.

GAGE.--Water-stage recorder. Altitude of gage is 2,040 ft, from topographic map. Prior to Dec. 27, 1962, at site 0.2 mi upstream at different datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--50 years, 477  $ft^3/s$ , 47.63 in/yr, 345,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 10.55 ft, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 184 ft<sup>3</sup>/s Sept. 12, 1942.

### STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW MONTHLY AND ANNUAL MEAN DISCHARGES 1921-70 BASED ON PERIOD OF RECORD 1922-70

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOI , IN YEA CE PROBAL	RS, AND	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	208	578	296	83	.28	5.2	1	239	216	204	195	185	178
NOVEMBER	208	976	465	200	.43	8.1	3	240	217	205	196	186	179
DECEMBER	225	1509	591	282	•48	10.3	7	242	218	206	197	187	180
JANUARY	245	1445	601	294	. 49	10.5	14	244	220	208	198	187	180
FEBRUARY	250	1241	587	241	.41	10.2	30	248	223	211	201	190	182
MARCH	331	896	516	143	. 28	9.0	60	252	226	214	203	192	185
APRIL	316	1111	628	168	. 27	11.0	90	256	229	216	205	194	187
MAY	298	1353	708	2 <b>2</b> 9	.32	12.4	120	263	233	220	210	199	192
JUNE	243	1175	518	226	.44	9.0	183	306	260	242	229	217	210
JULY	207	488	303	61	.20	5.3							
AUGUST	192	334	260	34	.13	4.5							
SEPTEMBER	190	315	254	30	.12	4.4							
ANNUAL	302	699	477	91	.19	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1921-70

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1921-70

YEARS, /	, IN CFS, AND ANNUA	L EXCEE	DANCE PR	OBABILIT	Y, IN PI	RCENT	PERIOD (CON-		INTERV	I CFS, FO 'AL, IN Y ICE PROBA	EARS, AN	ID ANNUAL	
1.25 80%	2 50% 	5 20% 	10 10% 	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
1910	3010	4750	6030	7780	9180	10600							
							1	2430	3690	4590	5780	6710	7670
WE I GHTED	) SKEW =	•004					3	1950	2920	3630	4590	5350	6160
							7	1550	2180	2610	3150	3550	3960
							15	1250	1640	1870	2130	2310	2480
							30	1040	1270	1390	1510	1590	1650
							60	854	1020	1100	1190	1240	1290
							90	759	895	962	1030	1070	1100

		DISCH	ARGE, I	V CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCENT	OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1040	841	728	641	573	517	433	371	322	288	275	262	250	237	221

### 14208500 OAK GROVE FORK AT TIMOTHY MEADOWS, OR

LOCATION.--Lat 45°07'00", long 121°48'00", in SW\u00e4 sec.23, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, 0.8 mi upstream from Anvil Creek, 10 mi upstream from Oak Grove intake dam, and 26.5 mi southeast of Cazadero.

DRAINAGE AREA. -- 54 mi<sup>2</sup>, approximately.

5%

356

10%

299

15%

267

20%

238

25%

222

30%

207

40%

181

168

159

70%

149

144

139

132

90%

124

95%

113

PERIOD OF RECORD.--March 1913 to September 1929. Published as "Oak Grove Fork of Clackamas River at Timothy Meadows, near Cazedero", prior to 1922.

GAGE.--Water-stage recorder. Datum of gage is 3,140 ft National Geodetic Vertical Datum of 1929 (from levels to approximate gage datum).

REMARKS.--No diversion above station. No regulation except natural storage in Clackamas Lake and in meadows above station.

AVERAGE DISCHARGE.--16 years (water years 1914-29), 188 ft3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 970 ft<sup>3</sup>/s Jan. 7, 1923, gage height, 3.20 ft, from rating curve extended above 460 ft<sup>3</sup>/s; minimum, 90 ft<sup>3</sup>/s Oct. 18-26, 28-31, Nov. 1-5, 1926.

STATISTICAL SUMMARIES

			Mean	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	ANNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	94	160	133	20	.15	5.7	1	122	107	99	93		
NOVEMBER	120	239	158	38	.24	6.8	3	123	108	100	93		
DECEMBER	121	350	190	67	.35	8.2	7	124	108	100	93		
JANUARY	123	329	200	66	.33	8.6	14	125	109	101	94 -		
FEBRUARY	158	330	200	48	.24	8.6	30	128	112	103	96		
MARCH	147	291	196	37	. 19	8.4	60	133	116	106	99		
APRIL	171	335	241	50	.21	10.4	90	137	119	109	101		
YAP	143	388	289	79	• 27	12.4	120	140	122	112	103		
JUNE	121	540	256	118	.46	11.0	183	152	129	118	109		
JULY	110	281	173	46	.27	7.4							
	103	185	147	23	. 15	6.3							
AUGUS F	103	107											
		170	141	21	. 15	6.1							
AUGUST SEPTEMBER ANNUAL  MAGNI	100 137	170 232	141	21 28	.15	100	 MAG	 SN I TUDE	AND PROB		OF ANNUAL		
MAGNI  SCHARGE	100  137  TUDE AND BASE  , IN CFS,	232 PROBABILITO ON PERIO	141 193 TY OF INDO OF RECATED RE	21 28 STANTANE CORD 191	.15 .15 :OUS PEAK I	6.1 100 FLOW	MAG	BASE DISCH	D ON PER ARGE, IN INTERV	CFS, FOR	DF ANNUAL ECORD 19 R INDICAT EARS, AND	ED RECUE	RRENCE
MAGNI  DISCHARGE YEARS,	100  137  TUDE AND BASE  , IN CFS, AND ANNUA	PROBABILITO ON PERIO	141 193 TY OF INDO OF RECATED RENCE PROB	21 28 ASTANTANE CORD 191 CCURRENCE ABBILITY,	.15 .15 OUS PEAK I 4-28 INTERVAL IN PERCEI	6.1 100 FLOW , IN NT	PERIOD (CON- SECU-	DISCH.	D ON PER ARGE, IN INTERVA	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I	ED RECUI ANNUAL N PERCEI	RRENCE
MAGNI  DISCHARGE YEARS,	100 137 TUDE AND BASE , IN CFS,	PROBABILITO ON PERIO	141 193 TY OF INDO OF RECATED RENCE PROB	21 28 NSTANTANE CCORD 191 CCURRENCE BABILITY,	.15 .15 COUS PEAK I 4-28 INTERVAL IN PERCEI	6.1 100 FLOW	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN  INTERV  EXCEEDANG	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I	14-28 ED RECUI ANNUAL N PERCEI	RRENCE
MAGNI  SCHARGE YEARS,  1.25	100  137  TUDE AND BASE  , IN CFS, AND ANNUA	PROBABILITO ON PERIO	141 193 TY OF INDO OF RECATED RENCE PROB	21 28 ASTANTANE CORD 191 CCURRENCE ABBILITY,	.15 .15 OUS PEAK I 4-28 INTERVAL IN PERCEI	6.1 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDANC	CFS, FOR AL, IN YE CE PROBAE 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECUI ANNUAL N PERCEI	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	141 193 TY OF INDD OF RE CATED RE NCE PROB	21 28 NSTANTANE ECORD 191 CCURRENCE AABILITY, 25 4%	.15 .15 .15 .15 .10US PEAK I 4-28 	6.1 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH.	D ON PER ARGE, IN INTERV EXCEEDANG 5 20%	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECUI O ANNUAL N PERCEI 50 2%	RRENCE
MAGNITALISCHARGE YEARS, 1.25 80%	100  137  TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	PROBABILITO ON PERIOD ON P	141 193 TY OF INDD OF RE CATED RE NCE PROB	21 28 NSTANTANE ECORD 191 CCURRENCE AABILITY, 25 4%	.15 .15 .15 .15 .10US PEAK I 4-28 	6.1 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH. 2 50% 483 451	D ON PER ARGE, IN INTERV EXCEEDANC 5 20% 684 630	CFS, FOF AL, IN YE E PROBAE 10 10% 819 749	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 990 899	ED RECUI D ANNUAL N PERCEI 50 2%	RRENCE
MAGNITALISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	141 193 TY OF INDD OF RE CATED RE NCE PROB	21 28 NSTANTANE ECORD 191 CCURRENCE AABILITY, 25 4%	.15 .15 .15 .15 .10US PEAK I 4-28 	6.1 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  483 451 412	D ON PER ARGE, IN INTERV EXCEEDANC 5 20% 684 630 545	CFS, FOR AL, IN YE CE PROBAR 10 10% 819 749 625	25 4% 990 899 718	TED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	141 193 TY OF INDD OF RE CATED RE NCE PROB	21 28 NSTANTANE ECORD 191 CCURRENCE AABILITY, 25 4%	.15 .15 .15 .15 .10US PEAK I 4-28 	6.1 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  483 451 412 368	D ON PER ARGE, IN INTERV EXCEEDANC 5 20% 684 630 545 471	CFS, FOR AL, IN YE PROBABLE 10 10% 819 749 625 533	25 4% 990 899 718 605	ED RECUI D ANNUAL N PERCEI 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	141 193 TY OF INDD OF RE CATED RE NCE PROB	21 28 NSTANTANE ECORD 191 CCURRENCE AABILITY, 25 4%	.15 .15 .15 .15 .10US PEAK I 4-28 	6.1 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  483 451 412 368 332	ARGE, IN INTERV, EXCEEDANG  5 20%  684 630 545 471 416	CFS, FOR AL, IN YEE PROBAB 10 10\$ 819 749 625 533 466	R INDICAT EARS, AND BILITY, I 25 4% 990 899 718 605 524	114-28 ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	141 193 TY OF INDD OF RE CATED RE NCE PROB	21 28 NSTANTANE ECORD 191 CCURRENCE AABILITY, 25 4%	.15 .15 .15 .15 .10US PEAK I 4-28 	6.1 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  483 451 412 368	D ON PER ARGE, IN INTERV EXCEEDANC 5 20% 684 630 545 471	CFS, FOR AL, IN YE PROBABLE 10 10% 819 749 625 533	25 4% 990 899 718 605	TED RECUI ANNUAL N PERCEI 50 2%	RRENCE

## 14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'50", in NEL sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi upstream from Anvil Creek, 0.3 mi downstream from Timothy Lake, 14 mi south of Government Camp, and at mile 15.5.

DRAINAGE AREA .-- 54.4 mi2.

PERIOD OF RECORD. -- July 1956 to September 1982.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 3,041.83 ft National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

REMARKS.--Flow regulated since 1956 by Timothy Lake. No diversion above station.

AVERAGE DISCHARGE.--26 years, 130  $ft^3/s$ , 32.45 In/yr, 94,180 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.---Maximum discharge, 2,110  $ft^3$ /s Dec. 24, 1964, gage height, 3.93 ft, from rating curve extended above 290  $ft^3$ /s on basis of slope-area measurement of peak flow; minimum, 3.7  $ft^3$ /s Sept. 23, 1968.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	42	274	154	68	.44	10.0	1						
NOVEMBER	87	337	179	64	.36	11.6	3						
DECEMBER	68	274	152	49	.32	9.8	7	40	33	29	25	22	
JANUARY	45	343	164	73	. 45	10.6	14	39	34	32	30 ·	29	
FEBRUARY	43	333	150	79	.53	9.7	30	41	34	32	30	29	
MARCH	31	452	158	96	.60	10.2	60	48	36	32	29	27	
APRIL	35	<b>2</b> 75	111	77	.70	7.2	90	54	39	33	30	27	
MAY	33	364	127	95	.75	8.2	120	60	41	34	29	25	
JUNE	32	301	108	79	.73	7.0	183	78	52	42	36	29	
JULY	31	168	71	40	.56	4.6							
AUGUST	33	134	67	32	.48	4.3							
SEPTEMBER	33	237	107	64	.60	6.9							
ANNUAL	79	222	129	37	.28	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1957-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1957-82

DISCHARGE, YEARS, A	IN CFS,						PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECUID ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
341	467	676	840	1080	1290								
							1	357	501	638	872	1100	
WEIGHTED	SKEW =	•599					3	347	463	559	704	833	
							7	328	415	479	568	640	
							15	306	369	413	471	517	
							30	271	329	369	422	462	
							60	230	283	316	358	389	
							90	204	251	283	324	356	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
324	281	249	223	196	174	132	93	61	49	<b>4</b> 6	43	40	37	35

### 14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

LOCATION.--Lat 45°04'20", long 121°57'00", on line between secs.3 and 4, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.2 mi upstream from Spring Creek, 0.7 mi upstream from Kink Creek, 1.0 mi upstream from Portland General Electric Co. diversion dam, 24 mi southeast of Estacada, and at mile 6.1.

DRAINAGE AREA .-- 126 mi2.

5%

950

10%

804

15%

20%

25%

573

30%

527

40%

466

PERIOD OF RECORD.--May 1909 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as both "Oak Grove Fork of Clackamas River at proposed intake, near Cazadero", and "Oak Grove Fork of Clackamas River at intake, near Cazadero", May 1909 to September 1910, as "Oak Grove Fork of Clackamas River at intake, near Cazadero", October 1910 to September 1921, and as "Oak Grove Fork at Portland General Electric Power Co. intake", October 1921 to September 1929.

GAGE.--Water-stage recorder. Datum of gage is 2,052.31 ft National Geodetic Vertical Datum of 1929. May 21, 1909, to Nov. 17, 1911, nonrecording gage and Mar. 26, 1912, to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi downstream, below Kink Creek, at different datum.

REMARKS.--Flow regulated since 1956 by Timothy Lake. No diversion above station.

AVERAGE DISCHARGE.--73 years, 500 ft<sup>3</sup>/s, 362,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft<sup>3</sup>/s Jan. 7, 1923, gage height, 5.45 ft, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of peak discharge for other stations in Clackamas River basin; minimum, 208 ft<sup>3</sup>/s Aug. 28-31, 1979.

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF TIMOTHY LAKE OUTLET STRUCTURE)

MONTHLY AND ANNUAL MEAN DISCHARGES 1910-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1911-55

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	I CFS, FO ., IN YEA ICE PROBA	RS, AND	ANNUAL N	ION-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	VARI- ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100
OCTOBER	252	<b>4</b> 78	343	 57	.17	5.8	1	305	273	257	244	230	220
IOV EMBER	263	811	431	132	.31	7.2	3	306	274	258	245	230	221
ECEMBER	268	1047	514	187	.36	8.6	7	308	276	260	246	232	222
ANUARY	271	1199	533	211	.40	8.9	14	310	278	261	248	233	224
EBRUARY	281	981	526	168	.32	8.8	30	315	282	266	252	238	228
MARCH	357	1048	541	143	.26	9.1	60	321	287	271	257	243	234
PRIL	348	1020	659	146	.22	11.0	90	327	292	274	260	245	236
MAY	389	1331	760	222	• 29	12.7	120	334	296	278	264	249	240
IUNE	316	1109	578	195	•34	9.7	183	360	314	294	280	265	256
	263	557	395	68	. 17	6.6							
IULY													
UGUST	252	432	349	47	.13	5.9							
UGUST			349 335	47 44	.13	5.9 5.6							
NUGUST SEPTEMBER NNUAL	252 259 325 	432 460 672 	335 495 TY OF IN	44 83 	.13 .17	5.6 100	 MA(			ABILITY			 LOW
MAGNIT ISCHARGE, YEARS, A	252 259 325 TUDE AND BASE IN CFS,	432 460 672 PROBABILI D ON PERI- FOR INDI- L EXCEEDA	335  495  TY OF IN OD OF RECATED RENCE PROB	83 ISTANTANE CORD 191 CURRENCE BABILITY	.13 .17 .17 .10US PEAK 10–55 	5.6 100 FLOW	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	CFS, FO	ECORD 1  R INDICA EARS, AN BILITY,	910-55 TED RECUID ANNUAL	 RRENCE
UGUST EPTEMBER NNUAL MAGNIT	252 259 325 TUDE AND BASE	432 460 672 PROBABILI D ON PERI	335  495  TY OF IN OD OF RECATED RE	83 ISTANTANE CORD 191 CURRENCE	.13 .17 .17 .18 .19 .19 .19 .19 .19 .19	5.6 100 FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 1  R INDICA EARS, AN BILITY,  25	910-55 TED RECUID ANNUAL IN PERCE	RRENCE
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	252 259 325 TUDE AND BASE IN CFS, ND ANNUA	432 460 672 PROBABILI D ON PERI- FOR INDI- L EXCEEDA 5 20%	495  TY OF IN OD OF RE CATED RE NCE PROE	83 ISTANTANE CORD 191 CURRENCE BABILITY, 25 4%	.13 .17 COUS PEAK 0 0-55 INTERVAL IN PERCEI	5.6 100 FLOW IN	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO	ECORD 1  R INDICA EARS, AN BILITY,	910-55 TED RECU D ANNUAL IN PERCE	RRENCE
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	252 259 325 TUDE AND BASE IN CFS, ND ANNUA	432 460 672 PROBABILI D ON PERI- FOR INDI- L EXCEEDA 5 20%	495  TY OF IN OD OF RE CATED RE NCE PROE	83 ISTANTANE CORD 191 CURRENCE BABILITY, 25 4%	.13 .17 COUS PEAK 0 0-55 INTERVAL IN PERCEI	5.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 1  R INDICA EARS, AN BILITY,  25	910-55 TED RECUID ANNUAL IN PERCE	RRENCE NT 100
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	252 259 325 TUDE AND BASE IN CFS, ND ANNUA 2 50%	432 460 672 PROBABILI D ON PERI- FOR INDI- L EXCEEDA 5 20%	495  TY OF IN OD OF RE CATED RE NCE PROE	83 ISTANTANE CORD 191 CURRENCE BABILITY, 25 4%	.13 .17 COUS PEAK 0 0-55 INTERVAL IN PERCEI	5.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER	CFS, FO AL, IN Y ICE PROBA	ECORD 1  R INDICA EARS, AN BILITY,  25 4%	910-55 TED RECUID ANNUAL IN PERCE	PRENCE NT 100 17
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A 1.25 80%	252 259 325 TUDE AND BASE IN CFS, ND ANNUA 2 50%	432 460 672 PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	495  TY OF IN OD OF RE CATED RE NCE PROE	83 ISTANTANE CORD 191 CURRENCE BABILITY, 25 4%	.13 .17 COUS PEAK 0 0-55 INTERVAL IN PERCEI	5.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y ICE PROBA 10 10%	R INDICA EARS, AN BILITY, 25 4%	910-55 TED RECU D ANNUAL IN PERCE 50 2%	RRENCE NT 100 1%
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A 1.25 80%	252 259 325 TUDE AND BASE IN CFS, ND ANNUA 2 50%	432 460 672 PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	495  TY OF IN OD OF RE CATED RE NCE PROE	83 ISTANTANE CORD 191 CURRENCE BABILITY, 25 4%	.13 .17 COUS PEAK 0 0-55 INTERVAL IN PERCEI	5.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  IARGE, IN INTERV EXCEEDAN  5 20%  2150 1890	10 OF R 1 CFS, FO 1 CFS, FO 10 10% 2660 2300	R INDICA EARS, AN BILITY, 25 4%	910-55 TED RECUID ANNUAL IN PERCE-50 2% 3960 3360	RRENCE NT 100 17 4600 3860 2660
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A 1.25 80%	252 259 325 TUDE AND BASE IN CFS, ND ANNUA 2 50%	432 460 672 PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	495  TY OF IN OD OF RE CATED RE NCE PROE	83 ISTANTANE CORD 191 CURRENCE BABILITY, 25 4%	.13 .17 COUS PEAK 0 0-55 INTERVAL IN PERCEI	5.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  1480 1320 1160	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20% 	10 OF R 1 CFS, FO AL, IN Y CE PROBA 10 10 2660 2300 1820	R INDICA EARS, AN BILITY, 25 4% 3380 2880 2150	910-55 TED RECU D ANNUAL IN PERCE 50 2% 	RRENCE NT 100 19 4600 3860 2660 1760
MAGNIT  ISCHARGE, YEARS, A  1.25 80%	252 259 325 TUDE AND BASE IN CFS, ND ANNUA 2 50%	432 460 672 PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	495  TY OF IN OD OF RE CATED RE NCE PROE	83 ISTANTANE CORD 191 CURRENCE BABILITY, 25 4%	.13 .17 COUS PEAK 0 0-55 INTERVAL IN PERCEI	5.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER	10D OF R 1 CFS, FO AL, IN Y 10E PROBA 10 10% 2660 2300 1820 1420	R INDICA EARS, AN BILITY, 25 4% 3380 2880 2150 1570	910-55 TED RECUID ANNUAL IN PERCE 50 2% 3960 3360 2400 1670	RRENCE

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

50%

417

60%

385

70%

360

75%

347

80%

332

85%

317

90%

302

95%

280

## 14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF TIMOTHY LAKE OUTLET STRUCTURE)

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-82

	MINIMUM	MAX IMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	RS, AND	TED RECUF ANNUAL NO IN PERCEN	<b>-</b> NC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	236	517	 399	76	. 19	6.9	1	256	233	224	217	210	
NOVEMBER	359	613	493	71	.14	8.5	3	260	237	227	219	211	
DECEMBER	325	1047	585	142	.24	10.1	7	262	239	229	222	215	
JANUARY	255	1036	599	154	. 26	10.3	14	266	240	230	224	218	
EBRUARY	250	959	584	149	. 26	10.1	30	272	245	234	227	221	
MARCH	327	1377	550	194	.35	9.5	60	281	253	242	235	229	
APRIL	311	825	548	122	.22	9.5	90	296	263	251	242	234	
4AY	292	1104	603	224	•37	10.4	120	312	275	260	250	241	
JUNE	265												
		1126	459	191	.42	7.9	183	356	316	298	286	274	
JULY	241	517	329	71	.22	5.7							
AUGUST	225	429	303	52	•17	5.2							
SEPTEMBER	247	517	340	75	.22	5.9							
ANNUAL	335	709	482	88	.18	100							
Olscharge,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD CURRENCE	OUS PEAK	 , IN		BASE	D ON PER  ARGE, IN	OD OF R	ECORD 1  R INDICA	TED RECUR	
Olscharge,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL IN PERCE	 , IN	PERIOD (CON- SECU-	BASE  DISCH	D ON PER ARGE, IN INTERV	OD OF R CFS, FO	ECORD 1  R INDICA EARS, AN	957 <b>-</b> 82 	RENCE
DISCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD COURRENCE	INTERVAL IN PERCE	 , IN NT	PERIOD (CON-	BASE  DISCH	D ON PER ARGE, IN INTERV	OD OF R CFS, FO	ECORD 1  R INDICA EARS, AN	957-82  TED RECUR D ANNUAL	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 1  R INDICA EARS, AN BILLTY,  25 4%	957-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50%	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA 10%	R INDICA EARS, AN BILLTY, 25 4%	957-82 TED RECUFD ANNUAL IN PERCEN 50 2% 3580	RRENCE IT
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 1350 1170	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 1990 1710	CFS, FO AL, IN Y CE PROBA 10 10% 2460 2130	R INDICA EARS, AN BILITY, 25 4%	957-82 TED RECUF D ANNUAL IN PERCEN 50 2% 3580 3200	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH 2 50% 1350 1170 996	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 1990 1710 1400	CFS, FO AL, IN Y CE PROBA 10 10% 2460 2130 1710	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  3090 2720 2140	957-82  TED RECURD ANNUAL IN PERCEN 2%  3580 3200 2490	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  1350 1170 996 851	D ON PER ARGE, IN INTERV. EXCEEDAN	CFS, FO AL, IN Y CE PROBA  10 10 2460 2130 1710 1320	R INDICA EARS, AN BILLTY, 25 4% 3090 2720 2140 1580	957-82  TED RECUFD ANNUAL IN PERCEN 50 2%	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASE DISCH2 50% 1350 1170 996 851 739	D ON PER	CFS, FO AL, IN Y CE PROBA 10 10% 2460 2130 1710 1320 1080	R INDICA EARS, AN BILITY,  25 41  3090 2720 2140 1580 1280	957-82 TED RECUFD ANNUAL IN PERCEN 50 2%	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH2 50% 1170 996 851 739 662	D ON PER	CFS, FO AL, IN Y CE PROBA-10 10%	R INDICA EARS, AN BILITY,  25 4\$  3090 2720 2140 1580 1280 1080	957-82 TED RECUFD ANNUAL IN PERCEN 50 2% 3580 3200 2490 1790 1430 1210	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD COURRENCE BABILITY, 25	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASE DISCH2 50% 1350 1170 996 851 739	D ON PER	CFS, FO AL, IN Y CE PROBA 10 10% 2460 2130 1710 1320 1080	R INDICA EARS, AN BILITY,  25 41  3090 2720 2140 1580 1280	957-82 TED RECUFD ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIO	CATED RE	CCURRENCE COURRE	INTERVAL IN PERCE 50 2%	, IN NT  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1350 1170 996 851 739 662 621	D ON PER ARGE, IN INTERV. EXCEEDAN  1990 1710 1400 1120 934 814 749	CFS, FO AL, IN Y CE PROBA  10 10%  2460 2130 1710 1320 1080 926 842	R INDICA EARS, AN BILITY,  25 4\$  3090 2720 2140 1580 1280 1080	957-82 TED RECUFD ANNUAL IN PERCEN 50 2% 3580 3200 2490 1790 1430 1210	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RE NCE PROE	CCURRENCE SABILITY,  25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  1350 1170 996 851 739 662 621  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20 1990 1710 1400 1120 934 814 749  RD 1957-	CFS, FO AL, IN Y CE PROBA 10 10% 2460 1710 1320 1080 926 842	R INDICA EARS, AN BILITY, 25 4%	957-82 TED RECUFD ANNUAL IN PERCEN 50 2% 3580 3200 2490 1790 1430 1210	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RE NCE PROE	CCURRENCE SABILITY,  25 4%	INTERVAL IN PERCE 50 2% OF DAILY	, IN NT 100 1% MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	BASE  DISCH  2 50%  1350 1170 996 851 739 662 621  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20 1990 1710 1400 1120 934 814 749  RD 1957-	CFS, FO AL, IN Y CE PROBA 10 10% 2460 1710 1320 1080 926 842	R INDICA EARS, AN BILITY, 25 4%	957-82 TED RECUFD ANNUAL IN PERCEN 50 2% 3580 3200 2490 1790 1430 1210	RRENCE NT

#### 14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

LOCATION.--Lat 45°07'30", long 122°04'20", in NE<sup>±</sup> sec.21, T.5 S., R.6 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi upstream from Three Lynx Creek, 0.25 mi downstream from powerplant, 17 mi southeast of Estacada, and at mile 47.8.

DRAINAGE AREA .-- 479 mi2.

PERIOD OF RECORD.--April 1909 to December 1913, October 1921 to September 1982. Prior to October 1911 (monthly discharge only), published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,091.69 ft National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). Apr. 23, 1909, to Jan. 4, 1914, nonrecording gage at about same site and datum. Nov. 1, 1921, to Dec. 27, 1924, water-stage recorder at present site at datum 0.91 ft higher.

REMARKS.--Minor regulation since May 1956 by Timothy Lake.

AVERAGE DISCHARGE.--65 years, 1,988  $ft^3/s$ , 56.36 in/yr, 1,440,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 21.7 ft, from floodmark, from rating curve extended above 34,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 15.06 ft; minimum recorded, 292 ft<sup>3</sup>/s Sept. 25, 1980; minimum daily, 427 ft<sup>3</sup>/s Oct. 5, 1958.

					5	TATISTIC	AL SUMMARIES	i					
М	ONTHLY AN	ND ANNUAL	MEAN DI	SCHARGES	1912-82		МА				OF ANNU RECORD	AL LOW FI 1913-82	-OW
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL I	ION-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	605	2511	1028	407	.40	4.3	1	628	556	519	490	457	435
NOVEMBER	573	4347	2118	1059	•50	8.8	3	654	596	569	548	525	511
DECEMBER	786	8271	2924	1510	.52	12.2	7	667	607	579	557	534	520
JANUARY	739	7157	2897	1482	.51	12.1	14	679	617	588	566	543	528
FEBRUARY	734	6205	2748	1224	.45	11.5	30	695	630	600	577	553	538
MARCH	1313	6559	2373	842	.35	9.9	60	723	651	619	595	570	554
APRIL	1180	4477	2644	739	. 28	11.0	90	755	675	639	612	585	569
MAY	1065	5548	2797	981	.35	11.7	120	803	706	668	640	614	600
JUNE	725	4879	1896	923	.49	7.9	183	1050	869	801	753	709	684
JÜLY	603	1778	980	256	. 26	4.1							
AUGUST	600	987	768	103	.13	3.2							
SEPTEMBER	577	1242	775	125	.16	3.2							
ANNUAL	1062	3128	1992	427	.21	100							
DISCHARGE YEARS,	, IN CFS,		CATED RE	CURRENCE			PERIOD (CON-		HARGE, II	N CFS, FO	YEARS, AI	ATED RECUND ANNUAL	
1 • 25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE	2	 5	10	 25	 50	100
							DAYS)	50 <b>%</b>	20%	10%	4%	2%	1%
11500	17400	25300 3	30400 3	6600 4	1000 45	300	1	14100	20700	24800	29700	33200	36500
WEIGHTE	O SKEW =	310					3	10700	15800	19200	23700	27100	30600
		• > . •					ź	7940	11100	13200	15800	17600	19400
							15	5970	7950	9170	10600	11600	12600
							30	4790	6060	6770	7550	8070	8530
							60	3850	4740	5240	5790	6150	6480
								3450	4170	4560	4980	5250	
							90	5450	4170		4700	9290	5490
			DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD						5 <b>4</b> 90
		DISCHA						OF RECO	ORD 1912-	-82			5490 

## 14210000 CLACKAMAS RIVER AT ESTACADA, OR

LOCATION.--Lat 45°18'00", long 122°21'10", in NEt sec.19, T.3 S., R.4 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.2 mi downstream from River Mill Dam, 1.5 mi northwest of Estacada, and at mile 23.1.

DRAINAGE AREA .-- 671 mi2.

6680

5170

4440

3910

3450

3080

2450

1980

1560

1190

1070

989

911

839

755

PERIOD OF RECORD.--April 1908 to September 1982. Monthly discharge only April 1908, published in WSP 1318. Published as "near Cazadero" January 1909 to September 1957.

GAGE.--Water-stage recorder. Datum of gage is 296.93 ft National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957, to Feb. 16, 1965, water-stage recorder at same site at datum 2.00 ft higher.

REMARKS.--Large diurnal fluctuations and some regulation caused by powerplants at River Mill Dam and, since 1958, North Fork Dam.
Minor regulation since 1956 by Timothy Lake. Two small diversions above station for Oregon City and Estacada municipal water supply.

AVERAGE DISCHARGE.--74 years, 2,747 ft<sup>3</sup>/s, 55.59 in/yr, 1,990,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 86,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.36 ft; minimum, 50 ft<sup>3</sup>/s Mar. 10, 1961, from rating curve extended below 260 ft<sup>3</sup>/s; minimum daily, 285 ft<sup>3</sup>/s Oct. 4, 5, 1958, caused by filling of North Fork dam forebay.

### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF NORTH FORK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1909-57

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1910-57

			uet.	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISC	INTERVAL	., IN YE	OR INDIC/ ARS, AND ABILITY,		10N-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	701	3776	1348	690	.51	4.2	1	773	686	642	607	 568	543
NOVEMBER	702	8708	3086	1805	•58	9.6	3	785	701	659	625	588	564
DECEMBER	1083	10450	3812	2093	.55	11.8	7	794	707	664	630	592	568
JANUARY	999	9656	3868	2019	.52	12.0	14	809	719	674	637	598	572
FEBRUARY	1363	6709	3633	1525	.42	11.2	30	834	738	691	653	613	586
MARCH	1656	6257	3417	1205	.35	10.6	60	873	766	715	675	632	605
APRIL	1539	6028	3726	1005	.27	11.5	90	922	798	741	697	651	623
MAY	1363			1255				999					
JUNE		7486	3674		.34	11.4	120		841	775	726	679	650
	927	6103	2560	1275	.50	7.9	183	1390	1100	977	891	807	757
JULY	720	3301	1313	488	.37	4.1							
AUGUST	694	1457	935	160	.17	2.9							
SEPTEMBER	669	1993	939	232	.25	2.9							
ANNUAL	1662	3916	2687	576	.21	100							
	BASE	D ON PERI	OD OF RE	CORD 190			MA 	BASE	ED ON PER	RIOD OF F	OF ANNUA	909-57	
OISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD 190	9-57 INTERVAL	, IN NT	PERIOD (CON-	BASE	ED ON PER HARGE, IN	CFS, FO		1909-57 TED RECU	IRRENCE
DISCHARGE,	BASE IN CFS,	FOR INDI	OD OF RE	CORD 190	9-57 INTERVAL	. IN	 PERIOD	BASE	ED ON PER HARGE, IN	CFS, FO	RECORD 1	1909-57 TED RECU	IRRENCE
OISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, IN INTERN EXCEEDAN	I CFS, FO	RECORD 1	TED RECUID ANNUAL IN PERCE	IRRENCE NT
OISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, IN INTERN EXCEEDAN	I CFS, FO	RECORD 1	TED RECUID ANNUAL IN PERCE	IRRENCE NT
OISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	I CFS, FC (AL, IN NICE PROB)	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%	1909-57  TED RECUID ANNUAL IN PERCE	IRRENCE NT 100
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	I CFS, F( VAL, IN NICE PROB)	DR INDICAYEARS, ANABILITY, 25 4%	1909–57  ITED RECUID ANNUAL IN PERCE  50 2%	IRRENCE : NT 100 1% 54300 42900
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	10 OF 6 1 CFS, F( /AL, IN \ 10 10 10 10 10 10 10 10 10 10 10 10 10 1	PRECORD 1 PRECOR	1909–57  ATED RECLI ID ANNUAL IN PERCE  50 2%  48900 38000	IRRENCE NT 100 1% 54300 42900 26300
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, IN INTER EXCEEDAN  5 20%  29200 22000 15400	10 OF 10 (AL, IN ) 10 10% 10 26900 18200	RECORD 1 DR INDICA YEARS, AN ABILITY, 25 4% 43300 33200 21500	1909–57  ATED RECUID ANNUAL IN PERCE  50 2%  48900 38000 24000	100 1% 54300 42900 26300 18600
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASE	HARGE, IN INTERVEXCEEDAN  5 20%  29200 22000 15400 11100 8480	1 CFS, FG (AL, IN VICE PROB/ 10 10% 35500 26900 18200 13000 9610	DR INDICA YEARS, AN ABILITY, 25 4% 43300 33200 21500 15300 10900	1909-57  ITED RECLID ANNUAL IN PERCE 50 2%  48900 38000 24000 117000 11800	100 1% 54300 42900 26300 18600
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 190 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH 2 50% 19600 14800 11000 8200 6550	HARGE, INTERVENCED AND PER 1 NTERVENCED AND 1 NTERVENCED	1 CFS, FG (AL, IN NICE PROB/ 10 10% 35500 26900 18200 13000	A3300 33200 215300	1909–57 ITED RECUID ANNUAL IN PERCE 50 2% 48900 38000 24000 17000	100 1% 54300 42900 26300 18600
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	CATED RENCE PROE	CURRENCE SABILITY,  25 4%	19–57 INTERVAL IN PERCEI 50 2% 66400 749	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  19600 14800 11000 8200 6550 5260 4720	HARGE, IN INTERN EXCEEDAN 5 20%	10 CFS, F(AL, IN NICE PROB) 10 10% 35500 26900 18200 9610 7290 6350	DR INDICA YEARS, AN ABILITY, 25 4% 43300 33200 21500 15300 10900 8130	1909-57  ITED RECLID ANNUAL IN PERCE 50 2% 48900 38000 24000 11000 11800 8690	100 1% 54300 42900 26300 18600 9200
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI IL EXCEEDA 5 20% 37700 4 213	CATED RENCE PROE	CORRO 190 COURRENCE SABILITY, 25 4%	99-57  INTERVAL, IN PERCEI  50 2%  66400 749  OF DAILY N	IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	DISCH  2 50%  19600 11800 8200 6550 5260 4720  OF RECC	HARGE, IN INTERNEXCEEDAN  29200 22000 22000 150400 11100 8480 6550 5770  DRD 1909-	1 CFS, FC (AL, IN ) (ICE PROB/ 10 10%  35500 26900 18200 18200 9610 7290 6350	DR INDICA YEARS, AN ABILITY, 25 4% 43300 33200 21500 15300 10900 8130 6980	1909-57  ITED RECLID ANNUAL IN PERCE 50 2% 48900 38000 24000 11000 11800 8690	100 1% 54300 42900 26300 18600 9200

## 14210000 CLACKAMAS RIVER AT ESTACADA, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF NORTH FORK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI-		PERIOD (CON-	0130	INTERVA	L, IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	767	2712	1391	537	.39	4.0	1	550	393	325	275		
NOVEMBER	1268	6263	3163	1488	.47	9.2	3	654	535	477	432		
DECEMBER	1030	11170	4894	2398	.49	14.2	7	728	643	605	575		
JANUARY	1036	8821	4766	2205	.46	13.8	14	765	687	654	630		
FEBRUARY	977	8938	4207	1972	.47	12.2	30	805	725	691	665		
MARCH	2210	8921	3524	1429	.41	10.2	60	865	774	733	702		
APRIL	1867	5177	3515	941	• 27	10.2	90	930	831	783	746		
MAY	1796	6396	3660	1198	•33	10.6	120	1010	900	850	812		
JUNE	1222	5143	2293	952	.42	6.7	183	1410	1210	1120	1060		
JULY	820	2018	1157	301	.26	3.4							
AUGUST	701	1208	899	142	.16	2.6							
SEPTEMBER	714	1602	994	198	.20	2.9							
ANNUAL	1454	4407	2866	646	.23	100							
DISCHARGE,	BASE , IN CFS,	PROBABILI D ON PERI	OD OF RE	CORD  CURRENCE	INTERVAL			BASI	ED ON PER	RIOD OF F	OF ANNUAL RECORD 19 OR INDICA	959-82  TED RECUF	<del>_</del>
DISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA 2	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE		PERIOD (CON- SECU-	BASI DISCH	HARGE, INTERN	RIOD OF F	DR INDICA (EARS, AND ABILITY,	959-82 TED RECUF D ANNUAL IN PERCEN	RRENCE
OISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD CURRENCE	INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASI	HARGE, IN	RIOD OF F	RECORD 19 DR INDICA (EARS, ANI	959-82  TED RECUF D ANNUAL	RRENCE
OISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA 2	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FC /AL, IN N NCE PROB/ 10	RECORD 19 OR INDICA (EARS, ANI ABILITY, 25 4%	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN INT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	100 OF F	OR INDICA (EARS, ANI ABILITY, 25 4%	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
OISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN INT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVEXCEEDAN 5 20%	10 10% 10% 40300 31600	PRECORD 19 OR INDICA (EARS, ANI ABILITY, 25 4% 46600 37700	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN INT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 23200 17800 13200	HARGE, IN INTERVENCE EXCEEDAN 5 20% 34200 26300 18500	10 OF F N CFS, FG /AL, IN N NCE PROB/ 10 10% 40300 31600 21600	PRECORD 19 OR INDICATE ARS, ANI ABILITY,  25 45  46600 37700 25000	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN INT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH 2 50% 23200 17800 13200 9420	HARGE, IN INTERVENCE EXCEEDAN 5 20% 34200 26300 18500 12400	10 10% 10% 1000 14000 14000	A6600 37700 25000 15700	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN INT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 250% 23200 17800 13200 9420 7240	HARGE, IN INTERVEXCEEDAN  5 20%  34200 26300 18500 12400 9120	10 OF F	25 4 4 4 4 6 6 0 0 3 7 7 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 1	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN INT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 2 50% 23200 17800 13200 9420	HARGE, IN INTERVENCE EXCEEDAN 5 20% 34200 26300 18500 12400	10 10% 10% 1000 14000 14000	A6600 37700 25000 15700	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCE	, IN INT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 250% 23200 17800 13200 9420 7240	HARGE, IN INTERVEXCEEDAN  5 20%  34200 26300 18500 12400 9120	10 OF F	25 4 4 4 4 6 6 0 0 3 7 7 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 0 1 1 2 0 0 1	TED RECUF D ANNUAL IN PERCEN 50 2%	100 13
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB 10 10% DURATIO	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 250% 23200 17800 13200 9420 7240 5750 0F RECC	HARGE, IN INTERN EXCEEDAN 5 20% 34200 26300 112400 9120 7200 6380 DRD 1959-	40300 31600 10400 1090 40300 31600 14000 10100 8050 7090	A6600 15700 15700 11200 9030 7900	FED RECUFD ANNUAL IN PERCEN	100 13
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE CATED RE NCE PROB 10 10% DURATIO	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2% OF DAILY CH WAS EQ	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	DISCH 250% 23200 17800 13200 9420 7240 5750 0F RECC	HARGE, IN INTERN EXCEEDAN 5 20% 34200 26300 112400 9120 7200 6380 DRD 1959-	40300 31600 10400 1090 40300 31600 14000 10100 8050 7090	A6600 15700 15700 11200 9030 7900	FED RECUFD ANNUAL IN PERCEN	100 1%

## 14211000 CLACKAMAS RIVER NEAR CLACKAMAS, OR

LOCATION.--Lat 45°23'36", long 122°31'54", in NE‡SW‡ sec.14, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.8 mi upstream from Johnson Creek, 2.1 mi southeast of Clackamas, and at mile 4.8.

DRAINAGE AREA.--930 mi<sup>2</sup> at gage, 936 mi<sup>2</sup> at Gladstone Bridge 3.6 mi downstream, where high-flow discharge measurements are made.

PERIOD OF RECORD.--September 1911 to April 1912 (published as "at Park Place"), October 1962 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 50.68 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Sept. 15, 1911, to Apr. 22, 1912, nonrecording gage at site 3.6 mi downstream at different datum. Oct. 1, 1962, to Sept. 10, 1969, water-stage recorder at site 300 ft downstream at present datum.

REMARKS.--Diurnal fluctuations and some regulation by powerplants and several storage dams upstream, operated by Portland General Electric Co. Small diversions above station for Estacada municipal water supply. All records given herein are for gage site.

AVERAGE DISCHARGE.--20 years, 3,636 ft3/s, 53.09 in/yr, 2,634,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 120,000 ft $^3$ /s Dec. 22, 1964, gage height, 27.0 ft, from floodmarks; minimum, 336 ft $^3$ /s Sept. 1, 11, 1969.

STATISTICAL SUMMARIES

								BAS	ED ON PE	RIOD OF I	RECORD 19	964-82 	
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICAT ARS, AND A ABILITY, I	ANNUAL NO	)N-
HTNOM	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	820	3501	1580	704	.45	3.6	1	669	550	494	451		
NOVEMBER DECEMBER	1349	8410	3890	2068	.53	8.9	3	741 777	637	584 639	542 604		
JANUARY	1113 1187	15290 12230	6867 6957	3329 3147	.48 .45	15.7 15.9	7 14	817	683 724	678	642		
EBRUARY	1118	11250	5390	2366	.44	12.3	30	865	765	716	677		
MARCH	2566	11410	4502	1984	.44	10.3	60	936	829	777	736		
NPRIL	2137	6493	4283	1148	.27	9.8	90	1000	888	832	788		
MAY	2219	6785	4246	1403	.33	9.7	120	1100	976	924	885		
JUNE	1446	5716	2680	1179	.44	6.1	183	1580	1340	1230	1160		
JULY	854	2187	1304	345	.26	3.0							
AUGUST	711	1285	989	181	.18	2.3							
SEPTEMBER	689	1378	1060	193	.18	2.4							
Alburat	1715	5718	3640	912	.25	100							
	TUDE AND	PROBABILI	 TY OF IN	ISTANTANE	OUS PEAK	FLOW	 MA				OF ANNUAL		
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE . IN CFS,	FOR INDI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE	INTERVAL IN PERCE	 , IN NT	 PERIOD (CON-	BASI	ED ON PER HARGE, II	RIOD OF F		963-82  TED RECUR O ANNUAL	RENCE
MAGNIT	TUDE AND BASE IN CFS, IND ANNUA	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU-	BASI DISCI	HARGE, II	RIOD OF F N CFS, FO VAL, IN N NCE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	963-82 FED RECUR O ANNUAL IN PERCEN	RENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE . IN CFS,	FOR INDI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE	INTERVAL IN PERCE	 , IN NT	 PERIOD (CON-	BASI	ED ON PER HARGE, II	RIOD OF F	RECORD 19  OR INDICAT YEARS, AND	963-82  TED RECUR O ANNUAL	RENCE
MAGNIT	TUDE AND BASE IN CFS, IND ANNUA	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE	BASI DISCI	HARGE, INTERNEXCEEDAN	N CFS, FO VAL, IN N NCE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	963-82 FED RECUR O ANNUAL IN PERCEN 50	RENCE
MAGNIT	TUDE AND BASE IN CFS, IND ANNUA	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE	BASI DISCI	HARGE, INTERNEXCEEDAN	N CFS, FO VAL, IN N NCE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	963-82 FED RECUR O ANNUAL IN PERCEN 50	RENCE
MAGNIT	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FC /AL, IN N NCE PROB/ 10	RECORD 19	P63-82  TED RECUR D ANNUAL IN PERCEN  50 2%	RENCE
DISCHARGE, YEARS, /	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, INTERNEXCEEDAN	N CFS, FO (AL, IN N NCE PROB) 10 10%	RECORD 19	P63-82  TED RECUR  ANNUAL  IN PERCEN  50 2%	RENCE
MAGNITODISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI 2 50% 32000 25100	HARGE, IN INTER EXCEEDAN 5 20%	N CFS, FC /AL, IN N NCE PROB/ 10 10%	RECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25  4%  58400 51600	P63-82  FED RECUR O ANNUAL IN PERCEN  50 2%	RENCE
MAGNITODISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON-SECU-TIVE DAYS)	DISCI	HARGE, IN INTERN EXCEEDAN 5 20% 45200 36700 26200	N CFS, FC /AL, IN N NCE PROB/ 10 10\$ 51900 43700 29700	DR INDICAT YEARS, AND ABILITY, I 25 4% 58400 51600 33100	P63-82  FED RECUR  PANNUAL  N PERCEN  50 2%	RENCE
MAGNITONISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60	DISCI 2 50% 32000 25100 19100 13700 10300 7860	45200 36700 26200 17200 17200 17200 17200	N CFS, F(AL, IN N NCE PROB/ 10 10% 51900 43700 29700 13600 13100	DR INDICAT YEARS, AND ABILITY, I 	P63-82  FED RECUR  PANNUAL  N PERCEN  50 2%	RENCE
MAGNITONISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	TY OF IN OD OF RE	ISTANTANE CORD CURRENCE IAB IL ITY,	INTERVAL IN PERCE 50 2%	, IN NT  100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50\$ 32000 25100 19100 13700 10300 7860 6980	HARGE, II INTER: EXCEEDAN 5 20% 45200 36700 26200 17400 12600 9940 8740	N CFS, F(AL, IN NCE PROB/ 10 10\$ 51900 43700 29700 13600 11100 9730	DR INDICAT YEARS, AND ABILITY, I 25 4% 58400 51600 33100 20400 14300	P63-82  TED RECUR D ANNUAL N PERCEN  50 2%	RENCE
MAGNITO	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	TY OF IN OD OF RE	ISTANTANE CORD CURRENCE IAB IL ITY,	INTERVAL IN PERCE 50 2%	, IN NT  100 1% 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60	DISCI 2 50\$ 32000 25100 19100 13700 10300 7860 6980	HARGE, II INTER: EXCEEDAN 5 20% 45200 36700 26200 17400 12600 9940 8740	N CFS, F(AL, IN NCE PROB/ 10 10\$ 51900 43700 29700 13600 11100 9730	DR INDICAT YEARS, AND ABILITY, I 	P63-82  TED RECUR D ANNUAL N PERCEN  50 2%	RENCE
MAGNITO	TUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDI	TY OF IN OD OF RECATED RENCE PROB	ISTANTANE CORD  CURRENCE IABILITY,  25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 32000 25100 13700 10300 7860 6980  OF RECC	HARGE, III INTER: EXCEEDAY  45200 36700 17400 12600 9940 8740  DRD 1963-	N CFS, FG (AL, IN N NCE PROB) 10 10 51900 43700 19000 13600 11100 9730	DR INDICAT YEARS, AND ABILITY, I 25 4% 58400 51600 33100 20400 14300 12300 10800	P63-82  TED RECUR D ANNUAL N PERCEN  50 2%	RRENCE

139

## 14211500 JOHNSON CREEK AT SYCAMORE, OR

LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW\ sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi southwest of Sycamore station, 2.5 mi east of city limits of Portland, and at mile 10.2.

DRAINAGE AREA .-- 26.5 mi2.

247

151

107

79

45

26

14

6.0

3.2

2.4

1.9

1.5

1.1

.7

PERIOD OF RECORD. -- July 1940 to September 1982.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 228.47 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Slight diurnal fluctuation at low flow caused by recreational ponds upstream. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years,  $54.6 \text{ ft}^3/\text{s}$ , 26.29 in/yr, 39,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.68 ft; minimum, 0.08 ft<sup>3</sup>/s Aug. 21,

											E ANNIIA	I I OW FI	OW
МС	NTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1941-82		MAG	SNITUDE A BASED		OD OF RE			
	 MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	RS, AND	TED RECU ANNUAL N IN PERCE	0N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1.3	65	10	15	1.48	1.6	1	.6	.3	.2	.2		
OVEMBER	1.6	239	71	63	.88	10.8	3	•6	.4	.3	•2		
DECEMBER	4.3	302	135	73	-54	20.5	7	•7	.4	.3	.2		
ANUARY	9.0	308	148	84	.57	22.5	14	.8	.5	.3	•3		
EBRUARY	16	320	119	62	•52	18.1	30	.9	.6	.4	.4		
MARCH	20	196	87	44	•50	13.2	60	1.2	.8	•6	.5		
PRIL	9.5	130	48	30	.63	7.2	90	1.5	1.0	.8	.7		
IAY	3.3	90	25	23	.93	3.7	120	2.1	1.4	1.1	.9		
IUNE	1.5	53	9.3			1.4	183	5.1	3.1	2.3	1.9	1.4	1
JULY	.6	7.1	2.3			•3							
UGUST EPTEMBER	.4	8.0	1.8			•3							
	•6	11	2.8	2.8	1.01	. 4							
ET TEMOLIK													
ANNUAL		91  PROBABILI D ON PERI			.30  OUS PEAK 1 1-82	100 	 MAG	NITUDE A		BILITY O			 LOW
MAGNIT	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INS	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON-	BASED  DISCHAI	ON PERI RGE, IN INTERVA	OD OF RE  CFS, FOR L, IN YE	CORD 19	941-82  TED RECUI	RRENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INSOD OF REC	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 1-82 INTERVAL IN PERCEI	 FLOW  , IN NT	PERIOD (CON- SECU-	BASED  DISCHAI	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 19 INDICAT ARS, ANI	941-82 TED RECUI D ANNUAL IN PERCEI	RRENCE
MAGNIT	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INS	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON-	BASED  DISCHAI	ON PERI RGE, IN INTERVA	OD OF RE  CFS, FOR L, IN YE	CORD 19	941-82  TED RECUI D ANNUAL	RRENCE
MAGNIT	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	 FLOW  , IN NT	PERIOD (CON- SECU- TIVE	BASED  DISCHAI  EX	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RE  CFS, FOR L, IN YE E PROBAB	INDICA ARS, ANI	941-82 TED RECUID ANNUAL IN PERCEI	RRENCE
MAGNIT	FUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE	BASED  DISCHAI  EX	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RE  CFS, FOR L, IN YE E PROBAB	INDICA ARS, ANI	941-82 TED RECUID ANNUAL IN PERCEI	RRENCE NT 100 1%
MAGNITI MAGNIT MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI	FUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILID ON PERI	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	INDICA ARS, ANI ALLITY,	941-82 TED RECUID ANNUAL IN PERCEI 50 2\$	RRENCE NT 100 1%
MAGNITA  DISCHARGE, YEARS, A  1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILID ON PERI	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI  E: 2 50%	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	CORD 19 LINDICATOR ARS, ANI	941-82 TED RECUID ANNUAL IN PERCEI 50 25	RRENCE NT 100 1%
MAGNIT	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILID ON PERI	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 1 3	BASED DISCHAI  2 50% 919 640	ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10 10 1550 984	INDICATOR ARS, ANICILITY,  25 4%  1780 1090	941-82 TED RECUI D ANNUAL IN PERCEI 50 2% 1930 1160	RRENCE NT 100 1% 2050 1210
MAGNIT	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILID ON PERI	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHAI  2 50%  919 640 443	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	1780 1090 1730	941-82 TED RECUID ANNUAL IN PERCEI 50 2\$ 1930 1160 768	2050 1210 799
MAGNITI MAGNIT MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI MAGNITI	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILID ON PERI	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCHAI E: 2 50% 919 640 443 308 233 176	ON PERI  RGE, IN INTERVA  KCEEDANC  5 20%  1330 870 591 409 296 226	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10% 1550 984 662 460 324 250	1NDICA: ARS, ANI ILITY, 25 4% 1780 1090 730 511 349 271	941-82 TED RECUID ANNUAL IN PERCEI 50 2\$ 1930 1160 768 541 362 283	2050 1210 799 566 372 292
MAGNITA  DISCHARGE, YEARS, A  1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILID ON PERI	TY OF IN: OD OF REC CATED REC NCE PROB/	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK ( 1-82 INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	BASED  DISCHAI  2  50%  919 640 443 308 233	ON PERI  RGE, IN INTERVA  KCEEDANC  5 20%  1330 870 591 409 296	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10% 1550 984 662 460 324	1780 1780 1780 1780 1780 1780 1780 1780	941-82 TED RECUID ANNUAL IN PERCEI 50 2\$ 1930 1160 768 541 362	100 1% 2050 1210 799 566 372
MAGNITI ISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN. OD OF REC  CATED REC NCE PROBA  10 10%  2250  DURATION	STANTANECORD 194  CURRENCE ABILITY,  25 4%  2720	OUS PEAK I 1-82 INTERVAL IN PERCEI 50 2% 3050 3	FLOW  , IN  NT  100  1%  370  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	919 640 443 308 233 176 154	ON PERI ON PER	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%  1550 984 662 460 324 250 214	1780 1090 1780 1090 1780 1780 1780 1780 1780 1780 1780 178	941-82 TED RECUID ANNUAL IN PERCEI  50 2\$  1930 1160 768 541 362 283	2050 1210 799 566 372 292
MAGNIT	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN. OD OF REC  CATED REC NCE PROBA  10 10%  2250  DURATION	STANTANECORD 194  CURRENCE ABILITY,  25 4%  2720	OUS PEAK I 1-82 INTERVAL IN PERCEI 50 2% 3050 3	FLOW  , IN  NT  100  1%  370  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	919 640 443 308 233 176 154	ON PERI ON PER	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%  1550 984 662 460 324 250 214	1780 1090 1780 1090 1780 1780 1780 1780 1780 1780 1780 178	941-82 TED RECUID ANNUAL IN PERCEI  50 2\$  1930 1160 768 541 362 283	2050 1210 799 566 372 292

### 14211720 WILLAMETTE RIVER AT PORTLAND, OR

LOCATION.--Lat 45°31'07", long 122°40'00", in NWŁNEŁ sec.3, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090012, in pier at east end of drawspan on upstream side of Morrison Bridge in Portland and at mile 12.8.

DRAINAGE AREA. -- 11,100 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1972 to September 1982. Gage-height records collected in this vicinity since 1879 are in reports of the National Weather Service.

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is 1.55 ft National Gaodetic Vertical Datum of 1929 (levels by National Weather Service).

REMARKS.--Flow regulated by many resevoirs upstream. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--10 years, 32,760 ft3/s, 23,730,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD. --Maximum discharge, 283,000 ft $^3$ /s Jan. 18, 1974, gage height, 23.84 ft; minimum daily discharge, 4,200 ft $^3$ /s July 10, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 7, 1894, and June 1, 1948, reached stages of 33.0 ft and 30.0 ft, respectively, from information by National Weather Service.

### STATISTICAL SUMMARIES

			TIENE OF	0011111020	1973-82		1-1			BABILITY ( RIOD OF RE			
	MINIMUM	MAXIMUM	WEAN	STAN- DARD DEVIA-	COEFFI-	PERCENT	PERIOD (CON- SECU-		INTERVA	N CFS, FOR	RS, AND A	NNUAL NO	)N-
МОМТН	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 <b>2%</b>	100 1%
OCTOBER	11810	22150	15900	3297	•21	4.0	1						
OVEMBER	14550	98410	37100	24990	.67	9.4	3						
ECEMBER	8894	129200	78690	39560	.50	20.0	7						
ANUARY	87 <b>9</b> 5	119200	67810	35180	.52	17.2	14						
EBRUARY	8050	94040	48800	26000	.53	12.4	30						
IARCH	17980	77790	41340	18450	.45	10.5	60						
PRIL	17630	58760	34400	13320	.39	8.7	90						
MAY	11150	34740	24050	7529	.31	6.1	120						
JUNE	8351	29300	16360	6748	-41	4.2	183						
ULY	6541	11810	8982	1614	. 18	2.3							
VUGUST	6136	9478	8251	1021	- 12	2.1	NOTE:	LESS TH	AN 10 YE	ARS OF DAT	IA AVAILA	ABLE.	
SEPTEMBER	8580	17350	11920	2395	.20	3.0							
ANNUAL MAGNI		54490 PROBABILI D ON PERI			.35 OUS PEAK I	100  FLOW	 M			BABILITY O			.ow
MAGN1	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE	ISTANTANE CORD		FLOW	PERIOD (CON-	BAS	ED ON PE HARGE, I		CORD 19 R INDICAT	73-82 ED RECUR	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU-	BAS DISC	ED ON PE	N CFS, FOR	CORD 19 R INDICAT EARS, AND	73-82 ED RECUR ANNUAL N PERCEN	RENCE
MAGNITISCHARGE	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD COURTENCE BABILITY,	OUS PEAK I	FLOW	PERIOD (CON-	BAS	ED ON PE HARGE, I	N CFS, FOF	CORD 19 R INDICAT	73-82 ED RECUR	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU- TIVE	DISC	HARGE, I INTER EXCEEDA	RIOD OF RE N CFS, FOF VAL, IN YE NCE PROBAE	R INDICATEARS, AND	FED RECUR ANNUAL N PERCEN	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU- TIVE	DISC	HARGE, I INTER EXCEEDA	RIOD OF RE N CFS, FOF VAL, IN YE NCE PROBAE	R INDICATEARS, AND	FED RECUR ANNUAL N PERCEN	RRENCE
MAGNI	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC	HARGE, I INTER EXCEEDA	N CFS, FOR VAL, IN YE NCE PROBAE	R INDICAT R INDICAT EARS, AND BILITY, I 25 4%	FED RECUR ANNUAL N PERCEN	RENCE
MAGNI  OISCHARGE YEARS,  1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC 2 50%	HARGE, I INTER EXCEEDA 5 20%	N CFS, FOF VAL, IN YE NCE PROBAE 10 10%	R INDICAT EARS, AND BILITY, I	ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
MAGNITISCHARGE YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC 2 50% 170000 165000	ED ON PE  HARGE, I INTER EXCEEDA  5 20%  229000 222000	N CFS, FOR VAL, IN YE NCE PROBAE 10 10%	R INDICAT EARS, AND BILITY, I	ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
MAGNI  OISCHARGE YEARS,  1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC 2 50% 170000 165000 153000	ED ON PE HARGE, I INTER EXCEEDA 5 20% 229000 222000 196000	N CFS, FOR VAL, IN YE NCE PROBAE 10 10% 256000 248000 212000	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
MAGNITISCHARGE YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISC 2 50% 170000 165000 153000 127000	ED ON PE HARGE, I INTER EXCEEDA 5 20% 229000 222000 196000 154000	N CFS, FOF VAL, IN YE NCE PROBAE 10 10% 256000 248000 212000 162000	R INDICAT REARS, AND BILITY, I	ED RECUR ANNUAL N PERCEN 50 2%	RRENCE
MAGNI I SCHARGE YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC  2 50%  170000 165000 127000 105000	HARGE, I INTER EXCEEDA 5 20% 222000 196000 154000 108000 108000	N CFS, FOR VAL, IN YENCE PROBAE  10 10\$ 256000 248000 212000 162000 133000	R INDICATEARS, AND BILITY, I	ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGNITISCHARGE YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE	ISTANTANE CORD CURRENCE BABILITY,	OUS PEAK I	FLOW  , IN  NT  1000  1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISC 2 50% 170000 165000 153000 127000 105000 81700 69900	HARGE, I INTER EXCEEDA 5 20% 229000 222000 196000 127000 108000 96700	N CFS, FORVAL, IN YENCE PROBAE  10 10%  256000 248000 212000 152000 113000 119000 110000	R INDICATEARS, AND BILITY, I	ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGNI DISCHARGE YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE ICORD ICOURRENCE SABILITY, 25 4%	OUS PEAK I	FLOW  , IN  100  1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 7 15 30 60 90	DISC 2 50% 170000 165000 127000 127000 105000 81700 69900 OF REC	ED ON PE  HARGE, I INTER EXCEEDA  5 20%  229000 196000 154000 127000 108000 96700 0RD 1973	N CFS, FOF VAL, IN YENCE PROBAE 10 10% 256000 248000 212000 162000 135000 119000 110000	R INDICAT	ED RECUR ANNUAL N PERCEN 50 2%	RENCE

9160

8270

7260

112000 81900 60400 46900 38700 32700 25100 19300 15500 12700 11500 10200

### BEAR CREEK BASIN 141

## 14248700 BEAR CREEK NEAR SVENSEN, OR

LOCATION.--Lat 46°06'48", long 123°37'55", in NE‡NE‡ sec.11, T.7 N., R.8 W., Clatsop County, Hydrologic Unit 17080006, on right bank 0.5 mi upstream from the Astoria Reservoir Dam, 3.8 mi southeast of Svensen, and at mile 5.4.

DRAINAGE AREA. -- 3.33 mi<sup>2</sup>.

53

40

34

29

25

21

16

12

8.9

6.8

6.2

5.6

5.0

4.5

3.8

PERIOD OF RECORD.--August 1965 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 700 ft, from topographic map.

REMARKS.--Flow regulated by Wickiup Lake and Middle Lake. No diversions above station.

AVERAGE DISCHARGE.--10 years (water years 1966-75),  $17.9 \text{ ft}^3/\text{s}$ , 73.00 in/yr, 12,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 342 ft<sup>3</sup>/s Jan. 11, 1972, gage height, 3.42 ft; minimum, 1.2 ft<sup>3</sup>/s Sept. 8, 9, 1967.

MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	STAN- DARD DEVIA- TION (CFS)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.0	12	7.5	2.2		3.5	1						
IOVEMBER	7.9	34	16	8.5	•53	7.5	3						
DECEMBER	16	49	34	12	• 34	15.8	7						
JANUARY	26	69	45	14	•31	20.7	14						
FEBRUARY	17	39	30	6.2	.20	14.2	30						
MARCH	14	47	27	10.0	.37	12.6	60						
APRIL	11	29	19	5.6	.30	8.7	90						
YAY	8.8	17	12	2.7	• 23	5.4	120						
JUNE	6.3	15	8.9	3.1	.34	4.2	183						
JULY NUGUST	3.6 4.0	8.7 6.8	5.9 <b>4.</b> 9	1.5	.25 .18	2.7 2.3	NOTE.	LECC TUA	1 40 VEA	RS OF DAT	A AVAII A	DI C	
SEPTEMBER		9.1	5.3	1.8	.34	2.5	NO IE:	LESS INA	N IO IEA	45 OF DAI	A AVAILA	DLC.	
NNUAL	12	24	18	4.2	.23	100							
MAGN1		PROBABILI ON PERIO				FLOW	MA			ABILITY O			.OW
OISCHARGE,	BASED , IN CFS, AND ANNUA	FOR INDIC	O OF RECO	ORD 1966- CURRENCE	INTERVAL	, IN NT	PERIOD (CON-	BASE DISCH	D ON PERARGE, IN INTERV		CORD 196	6-75  ED RECUR	RENCE
DI SCHARGE,	BASED , IN CFS,	ON PERIOR	O OF RECO	ORD 1966- CURRENCE	INTERVAL		PERIOD (CON- SECU- TIVE	DISCH.	D ON PER ARGE, IN INTERVIEXCEEDANG	CFS, FOR L, IN YECE PROBAB	CORD 196 INDICAT ARS, AND ILITY, I	6-75 ED RECUR ANNUAL N PERCEN	RENCE
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV	CFS, FOR	CORD 196 INDICAT ARS, AND	6-75 ED RECUR ANNUAL N PERCEN	RENCE
) SCHARGE, YEARS, /	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE	DISCH.	D ON PER ARGE, IN INTERVIEXCEEDANG	CFS, FOR L, IN YECE PROBAB	CORD 196 INDICAT ARS, AND ILITY, I	6-75 ED RECUR ANNUAL N PERCEN	RENCE
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERVIEXCEEDANG 5 20%	CFS, FOR AL, IN YE E PROBAB	CORD 196  INDICAT ARS, AND ILLITY, I  25 4%	ED RECUF ANNUAL N PERCEN 50 2%	100 17
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.	D ON PER  ARGE, IN INTERVIEXCEEDANG  5 20%	CFS, FOR L, IN YE E PROBAB 10%	CORD 196 INDICAT ARS, AND ILLITY, I	ED RECUF ANNUAL N PERCEN 2%	100 17
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%	D ON PER  ARGE, IN INTERV EXCEEDANG  5 20%  152 116	CFS, FOR AL, IN YE CE PROBAB 10 10%	CORD 196 CORD 196 CINDICAT ARS, AND ILLITY, I 25 4%	ED RECUF ANNUAL N PERCEN 2%	100 17
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  107 86 70	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 152 116 91	CFS, FOR AL, IN YE AL, IN YE PROBAB 10 10% 187 137	CORD 196 CORD 196 CINDICAT ARS, AND ILLITY, I 25 4%	ED RECUF ANNUAL N PERCEN 2%	100 17
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  107 86 70 59	D ON PER  ARGE, IN INTERV EXCEEDANC  5 20%  152 116 91 76	10D OF RE CFS, FOR AL, IN YE CE PROBAB 10% 10% 187 137 105 87	CORD 196 INDICAT ARS, AND ILITY, I 25 4%	6-75 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	O OF RECO	ORD 1966- CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCH.  2 50%  107 86 70 59 48	D ON PER  ARGE, IN INTERV EXCEEDANC  5 20%  152 116 91 76 60	CFS, FOR AL, IN YE E PROBAB 10 10 10 10 10 10 10 10 10 10 10 10 10	CORD 196	6-75 ED RECUR ANNUAL N PERCEN 50 2%	100 17
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RECO	DRD 1966- CURRENCE BILITY, 25 44	INTERVAL IN PERCE	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  107 86 70 48 41 37	ARGE, IN INTERV. EXCEEDANCE 5 20%	CFS, FOR AL, IN YEE PROBAB  10 10% 187 137 105 87 67 57	CORD 196	6-75 ED RECUR ANNUAL N PERCEN 50 2%	100 17
1.25 80%	BASED , IN CFS, AND ANNUA 2 50%	FOR INDIG	DOF RECONCE PROBA- 10 10%	URRENCE BILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH.  2 50%  107 86 70 59 48 41 37	D ON PER  ARGE, IN INTERV. EXCEEDANC  5 20%  152 116 91 76 60 51 46  RD 1966-7	10 OF RE CFS, FOR AL, IN YE E PROBAB  10 10%  187 137 105 87 67 57 51	CORD 196	6-75 ED RECUR ANNUAL N PERCEN 50 2%	100 1,8

142 YOUNGS RIVER BASIN

## 14251500 YOUNGS RIVER NEAR ASTORIA, OR

LOCATION.--Lat 46°04'02", long 123°47'20", in NW½ sec.27, T.7 N., R.9 W., Clatsop County, Hydrologic Unit 17080006, on left bank 50 ft upstream from crest of Youngs River Fails, 2.7 mi southwest of Olney, and 9 mi south of Astoria.

DRAINAGE AREA .-- 40.1 mi2.

PERIOD OF RECORD. -- August 1927 to September 1958.

GAGE.--Water-stage recorder. Datum of gage is 63.27 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 12, 1934, at site 1.2 mi upstream at different datum.

REMARKS.--No regulation. Youngs River-Lewis and Clark Water District has diverted water 4 ml above station for domestic use below station since 1941.

AVERAGE DISCHARGE.--31 years (water years 1928-58), 178 ft<sup>3</sup>/s, 128,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft<sup>3</sup>/s Feb. 10, 1949, gage height, 13.66 ft, from rating curve extended above 2,300 ft<sup>3</sup>/s; minimum, 3.3 ft<sup>3</sup>/s Sept. 22, 1951.

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF THE DIVERSION STRUCTURE)

MONTHLY	AND ANNUAL	MEAN DISCHARGES	1928-41	MAGNITUDE A

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1929-41

998

751

582

751

553

437

399

1140

881

675

1290

1050

790

626

				STAN- DARD DEVIA-	CIENT OF	PERCENT OF	PERIOD (CON-	1	ARGE, IN INTERVAL, EXCEEDANC	IN YEAR	S, AND AN	NNUAL NO	DN <del>-</del>
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE Days)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	8.2	234	81	80	.99	4.0	1	5.3	4.4	3.9	3.6		
NOVEMBER	7.9	638	258	212	.82	12.8	3	5.4	4.4	4.0	3.7		
DECEMBER	<b>16</b> 8	1159	381	260	.68	19.0	7	5.5	4.6	4.2	3.9.		_
JANUARY	148	611	356	145	-41	17.7	14	5.9	4.9	4.4	4.1		
FEBRUARY	100	<b>58</b> 8	305	162	.53	15.2	30	6.5	5.5	5.1	4.9		_
MARCH	88	430	279	111	.40	13.9	60	8.2	6.6	5.9	5.3		
APRIL	44	348	177	105	.59	8.8	90	10	7.9	6.9	6.2		-
MAY	22	153	83	41	.49	4.1	120	13	9.4	8.2	7.5		-
JUNE	18	95	46	28	.61	2.3	183	27	21	19	18		-
JULY	8.7	35	18	7.2	.40	.9							
AUGUST	5.7	14	9.0	2.6	. 29	. 4							
SEPTEMBER	4.9	63	17	17	.99	.9							
ANNUAL	102	233	167	43	.26	100							
OISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	L EXCEEDAI	OD OF REC	CORD 1928 CURRENCE	I-58 INTERVAL, IN PERCEN	, I <b>N</b> NT	PERIOD (CON-	BASEC DISCHA	AND PROBA O ON PERI ARGE, IN INTERVA	OD OF REC	INDICATE	28-41 ED RECUF ANNUAL	RENCI
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF REC CATED REC NCE PROBA	CURRENCE ABILITY,	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU-	BASEC DISCHA	ARGE, IN INTERVA	OD OF RECEIVED	INDICATE ARS, AND	28-41 ED RECUP ANNUAL PERCEN	RRENCI
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC	OD OF REC	CORD 1928 CURRENCE	I-58 INTERVAL, IN PERCEN	, I <b>N</b> NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA	ARGE, IN INTERVA	OD OF RECCES, FOR L, IN YE. E PROBAB	INDICATE ARS, AND ILITY, IN	28-41 ED RECUF ANNUAL N PERCEN	RRENCI
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED REC NCE PROBA	CURRENCE ABILITY,	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU-	BASEC DISCHA	ARGE, IN INTERVA	OD OF RECEIVED	INDICATE ARS, AND	28-41 ED RECUP ANNUAL PERCEN	RRENC
OISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL 5 20%	CATED REC NCE PROBA	CURRENCE ABILITY,	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	O ON PERI	OD OF REC	INDICATE ARS, AND ILITY, IN	28-41 ED RECUF ANNUAL N PERCEN	RRENC
DISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED REC NCE PROBA	CORD 1928 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA	ARGE, IN INTERVA	OD OF RECCES, FOR L, IN YE. E PROBAB	INDICATE ARS, AND ILITY, IN	28-41 ED RECUF ANNUAL N PERCEN	RRENC

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1928-41

15

30

60

_			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	660	437	330	<b>25</b> 3	199	156	108	73	43	23	17	12	9.7	8.0	6.5

# YOUNGS RIVER BASIN

# 14251500 YOUNGS RIVER NEAR ASTORIA, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF THE DIVERSION STRUCTURE)

MONTHLY AND ANNUAL MEAN DISCHARGES 1942-58

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1943-58 143

	MANIMONA	MAVIMIM	14541	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	J	NTERVAL,	, IN YEA	R INDICAT RS, AND A BILITY, I		)N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.8	280	109	89	.82	4.8	1	5.9	4.5	4.0	3.6		
NOVEMBER	21	598	291	141	. 48	12.8	3	6.0	4.6	4.1	3.7		
DECEMBER	115	746	433	154	.36	19.1	7	6.2	4.8	4.2	3.8		
JANUARY	130	879	405	207	.51	17.9	14	6.6	5.1	4.5	4.1		
FEBRUARY	187	716	412	132	.32	18.2	30	7.5	5.7	5.0	4.5		
MARCH	143	6 <b>05</b>	276	125	.45	12.2	6 <b>0</b>	9.5	7.0	6.0	5.3		
APRIL	71	332	178	80	.45	7.9	90	12	8.4	7.1	6.3		
MAY	27							17	11	9.2	7.6		
		184	73	40	.55	3.2	120						
JUNE	16	96	44	20	.46	1.9	183	35	25	20	17		
JULY	8.1	50	22	13	.58	1.0							
AUGUST	5.0	21	11	4.5	.41	.5							
SEPTEMBER	5.9	31	13	7.7	. 57	•6							
ANNUAL	116	293	188	40	.21	100							
DISCHARGE,	BASE , IN CFS,		OD OF RE	CORD	INTERVAL	 , IN		BASED	ON PERI	OD OF RE	OF ANNUAL ECORD 19 R INDICAT	42-58  ED RECUR	
DISCHARGE,	BASE , IN CFS,	D ON PERI	OD OF RE	CORD	INTERVAL IN PERCE	 , IN	PERIOD (CON- SECU-	BASED  DISCHA	ON PERI	OD OF RECEIVED	ECORD 19	42-58 ED RECUR ANNUAL	RENCE
DISCHARGE, YEARS,	BASE IN CFS,	FOR INDI	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASED  DISCHA	ON PERI	OD OF RECEIVED	ECORD 19 R INDICATEARS, AND	42-58 ED RECUR ANNUAL	RENCE
DISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	42-58  ED RECUR ANNUAL N PERCEN 50 2%	RENCE
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI	CFS, FORL, IN YEE PROBAR	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 2960	42-58 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
DISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50% 1900 1400	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 2340 1720	CFS, FORL, IN YEE PROBAR	2960 2180	42-58 ED RECUR ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED DISCHA  E 2 50%  1900 1400 1050	ON PERI 	OD OF RECEIVED TO THE PROBABLE	2960 2180 1560	42-58  ED RECUR ANNUAL N PERCEN  50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50% 1900 1400 1050 777	ON PERI RGE, IN INTERVA XCEEDANG 5 20% 	OD OF RECEIVED TO THE PROBABLE	2960 2180 1170	42-58  ED RECUR ANNUAL N PERCEN  50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%  1900 1400 1050 777 611	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 2340 1720 1280 960 766	OD OF RICCOMP.  CFS, FOIL, IN YIE PROBABLE  10 10 10 1930 1410 1060 844	25 4%	42-58 ED RECUR ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%  1900 1400 1050 777 611 477	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 2340 1720 1280 960 766 602	OD OF RICCES, FOIL, IN YEE PROBAGE 10 10% 2620 1930 1410 106844 677	25 4% 2960 2180 1560 1170 922 764	42-58  ED RECUR ANNUAL N PERCEN  50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%  1900 1400 1050 777 611	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 2340 1720 1280 960 766	OD OF RICCOMP.  CFS, FOIL, IN YIE PROBABLE  10 10 10 1930 1410 1060 844	25 4%	42-58 ED RECUR ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	CATED RENCE PROE	CORD CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50\$  1900 1400 1050 777 611 477 460	ON PERI RGE, IN INTERVM XCEEDANC 5 20% 	CFS, FOIL, IN YEE PROBAI 10 10% 2620 1930 1410 1060 844 677 612	25 4% 2960 2180 1560 1170 922 764	42-58 ED RECUR ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI- L EXCEEDA	CATED RENCE PROE	CORD CURRENCE SABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%  	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCHA  E 2 50%  1900 1400 1050 777 611 477 460  OF RECOR	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 1720 1720 1280 960 766 602 561 D 1942-5	OD OF RICE PROBAL  10 10 10 10 10 10 10 10 10 10 10 10 10 1	25 4% 2960 2180 1560 1170 922 764 666	42-58 ED RECUR ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI- L EXCEEDA	CATED RENCE PROE	CORD CURRENCE SABILITY, 25 4%	INTERVAL IN PERCE 50 2% OF DAILY	, IN NT 100 1%  	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1900 1400 1050 777 611 477 460  OF RECOR	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 1720 1720 1280 960 766 602 561 D 1942-5	OD OF RICE PROBAL  10 10 10 10 10 10 10 10 10 10 10 10 10 1	25 4% 2960 2180 1560 1170 922 764 666	42-58 ED RECUR ANNUAL N PERCEN 50 2%	100 1%

## NEHALEM RIVER BASIN

## 14301000 NEHALEM RIVER NEAR FOSS, OR

LOCATION.--Lat 45°42'15", long 123°45'15", in NW± sec.35, T.3 N., R.9 W., Tillamook County, Hydrologic Unit 17100202, on right bank 0.2 mi upstream from Cook Creek, 2.2 mi northeast of Foss, and at mile 13.5.

DRAINAGE AREA .-- 667 mi2.

10900

PERIOD OF RECORD. -- October 1939 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 32.60 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to Nov. 11, 1939, nonrecording gage.

REMARKS.--No regulation. Several small diversions for irrigation and domestic use above station.

AVERAGE DISCHARGE.--43 years, 2,727 ft<sup>3</sup>/s, 55.52 in/yr, 1,976,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 23.11 ft; minimum, 34 ft<sup>3</sup>/s Aug. 29-31, 1967.

## STATISTICAL SUMMARIES

100

М	ONTHLY AN	ID ANNUAL	MEAN DI	SCHARGES	1940-82		МА				OF ANNU		LOW
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICARS, AND	ANNUAL I	NON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL	1063 				.84 .62 .41 .50 .42 .44 .41 .46 .33 .33 .86 .24	2.6 11.1 19.6 19.6 18.1 13.4 8.2 3.8 1.7 .8 .4 .7	1 3 7 14 30 60 90 120 183				49 50 53 57 65 77 91 115 231	-	37 38 40 44 50 60 72 91 170
	, IN CFS,		ICATED R	ECURRENCE	INTERVAL		 PERIOD (CON-		HARGE, INTERN	N CFS, F	RECORD  OR INDICA YEARS, AN	ATED RECU	_
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE	2	 5	10	 25	50	100
21700	27800	35200	39600	44900 4	<b></b> 18600 52	100	DAYS)	50% 	20%	10%	4%	2 <b>%</b> 	1% 
WEIGHTE	SKEW =	141					1 3 7 15 30 60 90	25300 21800 16700 13000 9810 7690 6960	31400 27200 20400 15800 11800 9480 8540	34900 30400 22300 17200 12800 10400 9290	39000 34100 24300 18500 13700 11400 10000	41700 36700 25600 19300 14200 12000 10400	44200 39100 26700 19900 14600 12500 10800
			DURATIO	ON TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF REC	ORD 1940-	82			
		DISCH	ARGE, IN	CFS, WH	CH WAS EQ	UALED OR	EXCEEDED FO	R INDIC	ATED PERC	ENT OF	TIME		

7510 5610 4380 3440 2770 1820 1140 651 364 271 202 159 129

## WILSON RIVER BASIN 145

## 14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW\set sec.8, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.2 mi upstream from Negro Jack Creek, 8.0 mi east of Tillamook, and at mile 11.4.

DRAINAGE AREA.--161 mi<sup>2</sup>, at cableway, 2.0 mi downstream, where all discharge measurements are made.

PERIOD OF RECORD.--October 1914 to September 1915, August to November 1916, July 1931 to September 1982. Prior to January 1915 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 71.89 ft National Geodetic Vertical Datum of 1929. Dec. 18, 1914, to Nov. 4, 1916, nonrecording gage at site 2.8 mi downstream at different datum. July 30, 1931, to Sept. 30, 1938, nonrecording gage at site 2.82 mi downstream at datum 28.83 ft lower. Oct. 1, 1938, to Oct. 17, 1968, water-stage recorder at site 2.1 mi downstream at datum 29.76 ft lower.

REMARKS.--No regulation. Small diversions for domestic use above station.

5%

4550

10%

20%

1790

15%

2270

25%

1460

30%

1220

40%

852

50%

591

60%

375

70%

223

75%

174

80%

137

85%

110

90%

95%

75

AVERAGE DISCHARGE.--52 years (water years 1915, 1932-82), 1,203 ft<sup>3</sup>/s, 101.47 in/yr, 871,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 36,000 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 16.91 ft; maximum gage height, 20.26 ft Dec. 22, 1964 (site and datum then in use); minimum discharge, 32 ft<sup>3</sup>/s Sept. 5, 1973, but may have been less for short period following a landslide Jan. 31, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1916 reached a stage of 20.8 ft, from floodmark, site and datum then in use.

## STATISTICAL SUMMARIES

				CTAN									
	MUMININ	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC		_, IN YE	OR INDICARS, AND	ANNUAL	NON-
	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 19
OCTOBER	 58	2230	621	527	.85	4.3	1	68	55	49	44	38	35
NOVEMBER	87	3975	1881	1025	.54	13.0	3	69	56	49	44	39	3€
DECEMBER	378	7988	2768	1265	.46	19.1	7	71	58	51	46	41	38
JANUARY	344	5776	2572	1225	.48	17.8	14	75	61	54	49	43	4(
EBRUARY	642	4619	2251	886	.39	15.5	30	82	66	58	53	47	43
MARCH	595	3637	1813	734	.40	12.5	60	97	75	65	58	51	47
APRIL	426	2550	1184	457	.39	8.2	90	115	86	74	66	57	53
4AY	202	1391	622	267	.43	4.3	120	144	104	89	79	70	64
JUNE	164	876	327	166	.51	2.3	183	267	196	167	147	126	115
JULY	79	304	166	59	.36	1.1							
AUGUST	44	240	108	35	.33	.7							
SEPTEMBER	40	780	168	157	.93	1.2							
ANNUAL	524	1698	1203	256	.21	100							
DISCHARGE, YEARS, AN	BASE	FOR INDIC	OD OF RE	CORD 191 CURRENCE	INTERVAL, IN PERCE	, IN NT	PERIOD (CON-	BASE		CFS, FO	RECORD	1915-82  ATED REC ND ANNUA	URRENCE L
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 ·	100 1%	SECU- TIVE	2	- <b></b> -5	10	25	50	100
							DAYS)	50 <b>%</b>	20%	10%	4%	2%	195
13400 1	7500	22900 26	5300 3	0600 3	3600 367	700							
							1	13200	17200	19700	22900	25200	27400
WEIGHTED	SKEW =	.010					3	9770	12600	14600	17100	19100	21200
							7	7080	9040	10300	12000	13200	14400
							15	5190	6590	7460	8520	9270	10000
							30	3970	4960	5540	6200	6660	7080
							60	3150	3900	4330	4810	5130	5430
							90	2870	3470	3760	4050	4220	4360

146 TRASK RIVER BASIN

## 14302500 TRASK RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°26'25", long 123°43'00", in NW±NW± sec.31, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.6 mi upstream from Gold Creek, 6.2 mi east of Tillamook, and at mile 10.4.

DRAINAGE AREA. -- 145 ml2.

PERIOD OF RECORD.--July 1931 to September 1955, October 1961 to June 1972.

GAGE.--Water-stage recorder. Datum of gage is 58 ft National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS .-- No regulation. Water diverted from the J. W. Barney Reservoir since July 1, 1972.

AVERAGE DISCHARGE.--34 years (water years 1932-55, 1962-72), 966 ft<sup>3</sup>/s, 90.47 in/yr, 699,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.34 ft; minimum, 42 ft<sup>3</sup>/s Oct. 15-18, 1952, Sept. 28, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage about 17 ft, probably Nov. 20, 1921, discharge, 30,000 ft<sup>3</sup>/s, from rating curve extended above 12,000 ft<sup>3</sup>/s. Flood of Dec. 21, 1955, reached a stage of 13.09 ft, from floodmark, discharge, 20,200 ft<sup>3</sup>/s.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1932-71

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-71

	MINIMIN	MAVIMIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		ARGE, IN INTERVAL EXCEEDAN	, IN YEAR	RS, AND	ANNUAL NO	-NC
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	50	1556	449	376	.84	3.9	1	71	58	52	47	42	
NOVEMBER	78	3289	1401	769	.55	12.0	3	72	59	53	48	42	
DECEMBER	714	5491	2172	988	.45	18.7	7	74	61	54	49 .	44	
JANUARY	644	4377	2135	962	.45	18.4	14	78	64	57	52	46	
FEBRUARY	577	3452	1805	657	.36	15.5	30	85	69	62	56	50	
MARCH	464	2695	1493	547	. 37	12.8	60	97	77	69	62	55	
APRIL	383	1951	944	382	.40	8.1	90	110	87	77	69	61	
MAY	196	1113	531	210	.40	4.6	120	134	102	89	80	71	
IUNE	161	636	303	127	.42	2.6	183	229	174	150	132	113	
IULY	90	273	165	48	•29	1.4							
NUGUST	59	183	108	27	.25	.9							
SEPTEMBER	55	492	127	84	•66	1.1							
ANNUAL	563	1273	966	167	.17	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1932-71

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-71

DISCHARGE YEARS,					CE INTER		PERIOD (CON-	DISC	INTER	/AL, IN	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1 <b>%</b>	SECU- TIVE	- <del>-</del>	 5	10	 25	50	100
							DAYS)	50%	20%	10%	4%	2%	1%
9900	12300	15600	17700	20500	22500								
							1	9550	12200	14000	16500	18400	
WEIGHTE	D SKEW =	.263					3	7280	9290	10800	12800	14500	
							7	5450	6950	7990	9340	10400	
							15	4170	5250	5880	6590	7080	
							30	3170	3970	4420	4910	5230	
							60	2510	3070	3370	3700	3910	
							90	2300	2720	2920	3100	3210	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-71

 		DISC	HARGE,	N CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 3550	2390	1810	1440	1180	990	719	502	330	205	163	133	112	93	78

## NESTUCCA RIVER BASIN

147

## 14302900 NESTUCCA RIVER NEAR FAIRDALE. OR

LOCATION.--Lat 45°18'40", long 123°25'05", in SW‡NW‡ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on right bank 100 ft upstream from former Meadow Lake, 0.4 mi downstream from Walker Creek, 5.3 mi southwest of Fairdale, and at mile 49.3.

DRAINAGE AREA .-- 6.18 mi2.

122

81

59

46

37

30

21

15

9.6

7.4

6.0

4.7

3.8

3.2

2.5

PERIOD OF RECORD.--June 1960 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,778.99 ft National Geodetic Vertical Datum of 1929 (levels by city of McMinnville).

REMARKS.--Flow regulated since March 1969 by McGuire Lake about 0.6 mi above station. Flow diverted from lake to Haskins Creek basin via trans-basin aqueduct.

AVERAGE DISCHARGE.--22 years, 32.2 ft<sup>3</sup>/s, 70.76 in/yr, 23,330 acre-ft/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 876 ft3/s Dec. 22, 1964, gage height, 10.43 ft; minimum, 0.76 ft3/s Aug. 9, 1976.

#### STATISTICAL SUMMARIES

	ONTHLY AN	D ANNOAL											
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	INDICATE S, AND AN ILITY, IN	NNUAL NO	)N-
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	3.8	31	16	8.4	.52	4.4	1	2.2	1.5	1.2	1.0		
NOVEMBER	13	118	55	29	.53	15.0	3	2.4	1.6	1.3	1.1		
DECEMBER	18	153	76	42	.56	20.6	7	2.5	1.7	1.3	1.1		
ANUARY	4.4	132	59	38	.64	16.1	14	2.9	1.8	1.4	1.1		
EBRUARY	8.4	111	46	29	.63	12.4	30	3.1	2.0	1.6	1.4		
MARCH	13	80	43	24	•55	11.7	60	3.6	2.3	1.8	1.5		
APRIL	7.2	63	32	16	•49	8.7	90	4.5	2.9	2.3	1.9		
YAN	6.7	28	15	6.2	.41	4.1	120	5.6	3.8	3.0	2.4		
JUNE	4.5	19	8.0	4.0	•50	2.2	183	8.8	6.3	5.1	4.3		
JULY	2.2	9.5	5.0	2.4	.49	1.4							
AUGUST	2.1	9.1	4.5	2.6	• 59	1.2							
SEPTEMBER	1.2	16	8.1	5.1	.62	2.2							
ANNUAL  MAGNIT		45 PROBABILI D ON PERIO				100 	MAG				 F ANNUAL CORD 197		.OW
MAGNII	FUDE AND BASE	PROBABILI	TY OF INS	STANTANE(CORD 196	DUS PEAK F 1-82	FLOW	MAG	BASED  DISCHAI	ON PERIORS  RGE, IN O	OD OF REC		70-82  ED RECUF ANNUAL	RENCE
MAGNIT DISCHARGE, YEARS, A	FUDE AND BASE . IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU-	BASED  DISCHAI	ON PERIORS RGE, IN O	OD OF REC CFS, FOR L, IN YEA E PROBAB	INDICATE ARS, AND	70-82 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF INS	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCE	FLOW , IN	PERIOD (CON-	BASED  DISCHAI	ON PERIORS  RGE, IN O	OD OF REC	CORD 197 INDICATE	70-82  ED RECUF ANNUAL	RENCE
MAGNIT	FUDE AND BASE . IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI	ON PERIO	OD OF REC	INDICATE ARS, AND ILITY, IN	70-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI  E: 2 50%	ON PERIOR RGE, IN O INTERVA XCEEDANC 5 20%	OD OF REC	INDICATE ARS, AND ILITY, IN  25 4%	70-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE IN CFS, AND ANNUA	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DI SCHAI E: 2 50%	ON PERIO	OD OF REC CFS, FOR L, IN YE, E PROBAB 10 10%	INDICATE ARS, AND ILITY, IN 25 4% 503 370	FORECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DI SCHAI  E: 2 50%  272 217 165	ON PERIOR RGE, IN CONTROL STATEMENT OF THE CON	OD OF REC CFS, FOR L, IN YE, E PROBAB 10 10% 440 330 260	INDICATE ARS, AND ILITY, IN  25 4%  503 370 297	FD RECUP ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI  2  50%  272  217  165  136	ON PERIO INTERVAL XCEEDANCE 5 20% 380 291 226 191	OD OF REG CFS, FOR L, IN YEA E PROBAB 10 10% 440 330 260 222	INDICATE ARS, AND ILITY, IN  25 4%  503 370 297 254	FOR THE CONTROL OF TH	RRENCE
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCHAI  E: 2 50%  272 217 165 136 105	ON PERIOD  ON PERIOD	OD OF REC CFS, FOR L, IN YEE E PROBAB 10 10% 440 330 260 222 174	INDICATE ARS, AND ILITY, IN  25 4%  503 370 297 254 202	FD RECUP ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHAIL  E;  2  50  272  217  165  136  105  83	RGE, IN G INTERVAL XCEEDANCI 5 20% 380 291 226 191 149 113	OD OF REC	DORD 197  INDICATE ARS, AND ILITY, IN  25 4%  503 370 297 254 202 138	FOR THE CONTROL OF TH	RRENCE
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 196 CURRENCE ABILITY,	DUS PEAK F 1-82 INTERVAL, IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCHAI  E: 2 50%  272 217 165 136 105	ON PERIOD  ON PERIOD	OD OF REC CFS, FOR L, IN YEE E PROBAB 10 10% 440 330 260 222 174	INDICATE ARS, AND ILITY, IN  25 4%  503 370 297 254 202	FOR THE CONTROL OF TH	RRENCE IT
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS	STANTANEC CORD 196 CURRENCE ABILITY, 25 4%	DUS PEAK F 1-82 INTERVAL IN PERCEI	FLOW  IN  IT  IT  IT  IT  IT  IT  IT  IT  IT	PERIOD (CON- SECU- TIVE DAYS)	DI SCHAIL  E: 2 50  272 217 165 136 105 83 71	380 291 226 191 149 113 95	OD OF REC	DORD 197  INDICATE ARS, AND ILITY, IN  25 4%  503 370 297 254 202 138	FOR THE CONTROL OF TH	RRENCE
MAGNITONISCHARGE, YEARS, A	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI' D ON PERIO FOR INDIO L EXCEEDA  5 20%  582 082	TY OF INS	STANTANEC CORD 196 COURRENCE BILITY, 25 4%	DUS PEAK FI-82  INTERVAL, IN PERCEI	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	DI SCHAI  E: 2 50%  272 217 165 136 105 83 71  OF RECORD	ON PERIOD ON PER	OD OF REC	ORD 197 INDICATE ARS, AND ILITY, IN 25 4% 503 370 297 254 202 138 113	FOR THE CONTROL OF TH	RRENCE

# 14303000 NESTUCCA RIVER NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°19'30", long 123°27'00", in E-1/2 sec.8, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, 0.2 mi downstream from Meadow Lake and 14 mi northwest of McMinnville.

DRAINAGE AREA.--12 mi², approximately.

160

66

55

46

30

19

12

5.7

4.6

3.7

3.0

2.5

2.0

PERIOD OF RECORD. -- October 1928 to September 1944.

GAGE. -- Water-stage recorder. Altitude of gage is 1,900 ft, from topographic map.

REMARKS.--No diversion above station. Flow slightly regulated by dam at outlet of Meadow Lake.

AVERAGE DISCHARGE.--16 years (water years 1929-44), 43.6  $ft^3/s$ , 31,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft<sup>3</sup>/s Dec. 22, 1933, and Dec. 27, 1937, gage height, 5.1 ft, from rating curve extended above 800 ft<sup>3</sup>/s; minimum, 1.0 ft<sup>3</sup>/s Oct. 11, 1929.

STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	I	NTERVAL,	IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 1 <b>0%</b>	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	1.2	33	9.3	9.1	.97	1.8	1	1.9	1.5	1.3	1.1		
OVEMBER	2.0	188	52	52	1.01	9.8	3	1.9	1.5	1.3	1.2		
DECEMBER	21	310	105	77	.73	20.0	7	1.9	1.5	1.3	1.2		
IANUARY	26	224	91	49	• 53	17.4	14	2.0	1.6	1.4	1.2		
EBRUARY	35	164	82	36	. 44	15.7	30	2.1	1.7	1.5	1.3		
MARCH	24	139	79	38	- 48	15.0	60	2.4	1.8	1.6	1.5		
APRIL	19	132	56	33	• 59	10.6	90	2.8	2.1	1.8	1.7		
MAY June	10	71	26	14	.55	5.0	120	3.4	2.5	2.1	1.9		
JULY	5.6	34	13	7.2	• 56	2.5	183	6.9	5.0	4.3	3.8		
AUGUST	3.2 1.5	10 <b>4.</b> 6	5.5 3.0	2.2 1.0	.40 .33	1.1 .6							
SEPTEMBER	1.4	12	3.3	2.6	•33 •77	.6							
	, • -	'	,,,	2.0	-,,	•0							
	25	67	44	17	7.1	100							
ANNUAL 		67  PROBABILI D ON PERIO				100  FLOW	 MAG				OF ANNUAL		
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INS DD OF REC CATED REC	STANTANEC CORD 1929 CURRENCE ABILITY,	DUS PEAK 9-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON-	BASED DISCHA	ON PERI  RGE, IN INTERVA	OD OF RECEIVED		29-44 ED RECUR ANNUAL	RENCE
MAGNI	TUDE AND BASE	PROBABILI D ON PERIO	TY OF INS	STANTANEO CORD 1929 CURRENCE	DUS PEAK 9-44 INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE	BASED DISCHA E	ON PERI  RGE, IN INTERVA XCEEDANC	OD OF RECOMMENDED	ECORD 19: R INDICATI EARS, AND BILITY, II	29-44 ED RECUF ANNUAL N PERCEN	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDAL 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1929 CURRENCE ABILITY,	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	BASED DISCHA E	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RECEIVED	R INDICATI EARS, AND BILITY, II	29-44 ED RECUF ANNUAL N PERCEN	RENCE
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEO CORD 1929 CURRENCE ABILITY, 25 4%	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI RGE, IN INTERVA XCEEDANC 5 20%	OD OF RECEIVED OF	ECORD 19: R INDICATI EARS, AND BILITY, II 25 4%	29-44 ED RECUF ANNUAL N PERCEN	RENCE
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEO CORD 1929 CURRENCE ABILITY, 25 4%	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  613 449	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  934 685	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND O	R INDICATE EARS, AND BILITY, II 25 4%	ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEO CORD 1929 CURRENCE ABILITY, 25 4%	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED  DISCHA  E 2 50%  613 449 300	ON PERI  RGE, IN INTERVA  XCEEDANC  5 20%  934 685 453	OD OF RE CFS, FOF L, IN YE E PROBAE 10 10% 	25 4% 1390 1060 738	29-44  ED RECUP ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEO CORD 1929 CURRENCE ABILITY, 25 4%	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED DISCHA  E 2 50% 613 449 300 205	ON PERI  RGE, IN INTERVA  XCEEDANC  5 20%  934 685 453 296	OD OF RECEIVED OF	R INDICATI EARS, AND BILITY, II 25 4% 1390 1060 738 452	29-44 ED RECUF ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEO CORD 1929 CURRENCE ABILITY, 25 4%	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50% 613 449 300 205 155	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 934 685 453 296 217	OD OF RECOMPANY OF	R INDICATI EARS, AND BILITY, II 25 4% 1390 1060 738 452 311	29-44  ED RECUP ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEO CORD 1929 CURRENCE ABILITY, 25 4%	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  613 449 300 205 155 121	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 934 685 453 296 217 162	OD OF RECEIVED OF	R INDICAT: EARS, AND BILITY, II  25 4%  1390 1060 738 452 311 222	29-44 ED RECUF ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEO CORD 1929 CURRENCE ABILITY, 25 4%	DUS PEAK 19-44 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50% 613 449 300 205 155	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 934 685 453 296 217	OD OF RECOMPANY OF	R INDICATI EARS, AND BILITY, II 25 4% 1390 1060 738 452 311	29-44 ED RECUF ANNUAL N PERCEN 50 2%	100 1%
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF IN: DD OF REC  CATED REC  NCE PROB/ 10 103 1423	STANTANEC CORD 1929 CURRENCE BILITY, 25 4%	DUS PEAK   DUS PEAK	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  613 449 300 205 155 121 106	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  934 685 453 296 217 162 137	OD OF RE- CFS, FOFL, IN YEE PROBAE- 10 10%	R INDICAT: EARS, AND BILITY, II  25 4%  1390 1060 738 452 311 222	29-44 ED RECUF ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILI' D ON PERIO FOR INDIC EXCEEDA  5 20%  1143 109	TY OF INS	STANTANEC CORD 1929 CURRENCE BILITY, 25 4%	DUS PEAK 19-44  INTERVAL IN PERCE  50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%  613  449  300  205  155  121  106  OF RECOR	ON PERI  RGE, IN INTERVA  XCEEDANC  5 20%  934 685 453 296 217 162 137  D 1929-4	OD OF RECEIVED OF	R INDICATI EARS, AND BILITY, II 25 4% 1390 1060 738 452 311 222 176	29-44 ED RECUF ANNUAL N PERCEN 50 2%	100 1%

149

## 14303600 NESTUCCA RIVER NEAR BEAVER, OR

LOCATION.--Lat 45°16'00", long 123°50'45", in SE±NE± sec.36, T.3 S., R.10 W., Tillamook County, Hydrologic Unit 17100203, on right bank 150 ft upstream from Saling Creek, 1.2 mi southwest of Beaver, and at mile 13.5.

DRAINAGE AREA.--180 mi2.

3960

2730

2090

1670

1370

1140

788

PERIOD OF RECORD. -- October 1964 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 43 ft, from river profile map.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--18 years, 1,090 ft<sup>3</sup>/s, 82.23 in/yr, 789,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft<sup>3</sup>/s Jan. 11, 1972, gage height, 22.0 ft, from floodmark; minimum, 32 ft<sup>3</sup>/s Sept. 14, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1962, reached a stage of 23.4 ft, discharge, 32,500 ft<sup>3</sup>/s caused by failure of Meadow Lake Dam.

#### STATISTICAL SUMMARIES

M	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1965-82		MA		AND PROP ED ON PE		OF ANNUAL RECORD 19		<b>,</b> ,
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF		PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	OR INDICATARS, AND A	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	91	842	376	252	.67	2.9	1	68	54	48	43		
NOVEMBER	209	3982	1390	872	•63	10.6	3	69	55	49	44		
DECEMBER	257	4440	2796	1109	-40	21.3	7	70	56	50	45		
ANUARY	273	4890	2611	1297	.50	19.9	14	74	59	52	47		
EBRUARY	453	2981	1898	706	.37	14.5	30	82	65	57	51		
IARCH	634	2833	1664	708	.43	12.7	60	100	74	64	56		
PRIL	469	1638	1030	350	.34	7.9	90	123	87	73	63		
AY	285	917	538	165	.31	4.1	120	151	106	89	77		
UNE	183	917	351	206	.59	2.7	183	251	187	160	141		
IULY	96	311	173	70	- 40	1.3							
UGUST	49	251	108	47	.43	.8							
EPTEMBER	54	412	175	120	•69	1.3							
ANNUAL MAGNI		1643 PROBABILI D ON PERI				100 	 MA				OF ANNUAL		 .ow
MAGNITO	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE	EOUS PEAK 55-82 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASE	ED ON PER HARGE, IN INTER\	RIOD OF F		965-82  TED RECUR O ANNUAL	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF IN OD OF RE	NSTANTANE CORD 196 CURRENCE BABILITY,	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU-	BASE DISCH	ARGE, INTERN	CFS, FO	RECORD 19 DR INDICAT YEARS, AND ABILITY, 1	965-82 FED RECUR O ANNUAL IN PERCEN	RENCE
MAGNITISCHARGE,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE	EOUS PEAK 55-82 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASE	ED ON PER HARGE, IN INTER\	RIOD OF F	RECORD 19 DR INDICAT YEARS, AND	965-82  TED RECUR O ANNUAL	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	NSTANTANE CORD 196 CURRENCE BABILITY,	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC (AL, IN NICE PROB)	RECORD 19 DR INDICAT YEARS, AND ABILITY, 1 25 4%	P65-82  FED RECUR  ANNUAL  IN PERCEN  50 2%	RENCE
MAGNITISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	I CFS, F(YAL, IN YICE PROB) 10 10 17400	DR INDICAT YEARS, AND ABILITY, 1 25 4%	P65-82  TED RECUR O ANNUAL IN PERCEN 50 2%	RENCE
MAGNITION MAGNITURE NAME NAME NAME NAME NAME NAME NAME NAM	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	17400 13800	DR INDICAT YEARS, AND ABILITY. 25 4%	P65-82  FED RECUR O ANNUAL IN PERCEN  50 2%	RRENCE IT 100 1%
MAGNI I SCHARGE, YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20% 15100 11900 8270	10 OF F	DR INDICAT YEARS, AND ABILITY, I 25 4% 19900 15900 10500	P65-82  FED RECUF  O ANNUAL  IN PERCEN  50  2%	RRENCE IT 100 1%
MAGNITION MAGNITURE NAME NAME NAME NAME NAME NAME NAME NAM	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 11000 8820 6450 4950	HARGE, IN INTERVEXCEEDAN  5 20%  15100 11900 8270 6210	1 CFS, F( VAL, IN N ICE PROB/ 10 10% 17400 13800 9310 6930	DR INDICAT YEARS, AND ABILITY, 1 25 4% 19900 15900 10500 7740	P65-82  FED RECUR O ANNUAL IN PERCEN  50 2%	RRENCE IT 100 1%
MAGNITUSCHARGE, YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCH	HARGE, IN INTERN EXCEEDAN 5 20% 15100 11900 8270 6210 4530	10% 17400 13800 9310 6930 4940	DR INDICAT YEARS, AND ABILITY, 1 25 4% 19900 15900 10500 7740 5380	P65-82  FED RECUF  O ANNUAL  IN PERCEN  50  2%	100 1%
MAGNITISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 E INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCH 2 50% 11000 8820 6450 4950 3770 3030	15100 11900 8270 6210 4530 3720	17400 17400	19900 15900 15900 15900 15900 15380 4410	P65-82  FED RECUF  O ANNUAL  IN PERCEN  50  2%	100 1%
MAGNI I SCHARGE, YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW  , IN  IN  100  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  11000 8820 6450 4950 3770 3030 2660	HARGE, IN INTER: EXCEEDAN 15100 11900 8270 6210 4530 3720 3320	10 10% 1 CFS, F(AL, IN NICE PROB/ 10 10% 17400 13800 9310 6930 4940 4070 3630	DR INDICAT YEARS, AND ABILITY, 1 25 4% 19900 15900 10500 7740 5380	P65-82  FED RECUF  O ANNUAL  IN PERCEN  50  2%	RRENCE IT 100 1%
MAGNITISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 196 CURRENCE BABILITY, 25 4%	EOUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW  , IN  IN  100  1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCH  2 50%  11000 8820 6450 4950 3770 3030 2660	HARGE, IN INTER: EXCEEDAN 15100 11900 8270 6210 4530 3720 3320	10 10% 1 CFS, F(AL, IN NICE PROB/ 10 10% 17400 13800 9310 6930 4940 4070 3630	19900 15900 15900 15900 15900 15380 4410	P65-82  FED RECUF  O ANNUAL  IN PERCEN  50  2%	RRENCE IT 100 1%
MAGNITUSCHARGE, YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20% 18300 2	TY OF IN OD OF RECOME OF THE OTHER OF THE OTHER	ISTANTANE ISTANTANE ICCURRENCE IC	EOUS PEAK 15–82  INTERVAL IN PERCE  50 2%  OF DAILY	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  11000 8820 6450 4950 3770 3030 2660  OF RECC	15100 1900 15100 15100 16210 4530 3720 1805 1905 1906 1900 1900 1900 1900 1900 1900 1900	10 CFS, F(AL, IN NICE PROB) 10 10 13800 9310 9310 4940 4070 3630 82	DR INDICAT YEARS, AND ABILITY, 1 25 4% 19900 10500 7740 5380 4410 3930	P65-82  FED RECUF  O ANNUAL  IN PERCEN  50  2%	RRENCE IT 100 1%

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143

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543

## SILETZ RIVER BASIN

## 14305500 SILETZ RIVER AT SILETZ, OR

LOCATION.--Lat 44°42'55", long 123°53'10", in NW\SW\sec.11, T.10 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on right bank, 1.8 mi downstream from Baker Creek, 1.5 mi east of Siletz, and at mile 42.6.

DRAINAGE AREA.--202 mi<sup>2</sup>. At sites prior to October 1938, 204 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1905 to November 1911, January to May 1912, January to June 1924, November 1924 to September 1982. Prior to December 1905, monthly discharge only published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 102.32 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1905, to Sept 30, 1938, nonrecording gage at various sites within 2.5 mi downstream at different datums.

REMARKS.--Slight regulation from logponds. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--63 years (water years 1906-11, 1926-82), 1,561 ft<sup>3</sup>/s, 104.94 in/yr, 1,131,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1905-12, 1924-82).--Maximum discharge, 34,600 ft<sup>3</sup>/s Nov. 22, 1909, gage height, 24.6 ft, site and datum then in use; minimum observed, 48 ft<sup>3</sup>/s Sept. 25, 26, Oct. 4, 1965, Sept. 28, 29, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1921, reached a stage of 31.6 ft, at site 2.5 mi downstream at different datum, from floodmark, discharge, 40,800 ft<sup>3</sup>/s, from rating curve extended above 17,000 ft<sup>3</sup>/s.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1906-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN INTERVAL EXCEEDANG	, IN YEA	RS, AND	ANNUAL N	0 <b>N-</b>
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	74	3412	780	768	.98	4.2	1	76	62	<b>5</b> 6	52	48	46
NOVEMBER	72	6207	2464	1566	.64	13.2	3	78	64	58	55	51	49
DECEMBER	401	7828	3448	1466	.43	18.5	7	80	66	61	57	54	52
JANUARY	518	7664	3350	1556	.46	17.9	14	85	70	64	60	56	54
FEBRUARY	752	6055	2974	1223	.41	15.9	30	95	77	70	64	59	<b>5</b> 6
MARCH	557	4560	2260	983	. 43	12.1	60	115	89	79	71	64	60
APRIL	387	3560	1511	706	.47	8.1	90	140	103	88	79	70	64
MAY	233	2579	838	447	.53	4.5	120	176	122	102	89	77	70
JUNE	144	1602	483	336	.70	2.6	183	327	231	194	169	145	131
JULY	105	602	222	102	•46	1.2							
AUGUST	65	419	133	53	.40	.7							
SEPTEMBER	59	1138	212	195	•92	1.1							
ANNUAL	660	2337	1545	352	•23	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1906-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906-82

OISCHARGE YEARS,	•	S, FOR IN JAL EXCEE					PERIOD (CON-	DISC		N CFS, FO	YEARS, AI	ND ANNUAL	L
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1% 	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%
16200	20700	25900	28900	32400	34700	36900							
							1	16900	21900	25000	28600	31200	33800
WEIGHTE	D SKEW :	279					3	13000	16300	18200	20500	22200	23800
							7	9350	11500	12800	14300	15400	16400
							15	6840	8320	9160	10100	10700	11300
							30	5230	6320	6860	7420	7760	8050
							60	4060	4990	5510	6070	6440	6780
							90	3690	4460	4840	5220	5440	5630

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80 <b>%</b>	85%	90%	95%
5810	3950	<b>295</b> 0	2320	1900	1570	1090	750	467	279	213	168	133	108	87

151

## 14306030 YAQUINA RIVER NEAR CHITWOOD, OR

LOCATION.--Lat 44°39'29", long 123°50'15", in NE±SW± sec.31, T.10 S., R.9 W., Lincoln County, Hydrologic Unit 17100204, on left bank 200 ft below Thornton Creek and 1.1 mi west of Chitwood.

DRAINAGE AREA .-- 71.0 mi2.

PERIOD OF RECORD.--October 1972 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 28.43 ft National Geodetic Vertical Datum of 1929.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--10 years, 251 ft<sup>3</sup>/s, 48.01 in/yr, 181,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,150 ft<sup>3</sup>/s Nov. 16, 1973, gage height, 14.43 ft; minimum, 2.8 ft<sup>3</sup>/s Sept. 27, 1974.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1973-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1974-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	7.8	83	33	25	•77	1.1	1						
NOVEMBER	20	1140	292	344	1.18	9.7	3						
DECEMBER	23	1089	707	336	.48	23.4	7						
JANUARY	34	979	571	331	.58	18.9	14						
FEBRUARY	90	826	474	270	.57	15.7	30				'		
MARCH	102	807	399	194	- 49	13.2	60						
APRIL '	112	515	283	130	.46	9.4	90						
4A Y	65	197	131	48	.36	4.3	120						
JUNE	33	242	73	62	.85	2.4	183						
JULY	14	65	26	14	.55	•9							
AUGUST	8.0	20	12	3.6	• 29	.4	NOTE:	LESS THAI	N 10 YEAF	RS OF DAT	TA AVAILA	BLE.	
SEPTEMBER	6.1	31	15	7.9	.52	.5							
ANNUAL	85	445	251	100	.40	100							

MAGNITUDE	AND PROBABILITY	0F	INSTANTANEOUS PEAK FLOW
	BASED ON PERIOD	OF	RECORD 1973-82

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1973-82

)1SCHARGE, YEARS, A							PERIOD (CON-		INTERV	I CFS, FOF /AL, IN YE	ARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20%	10 10%	25 <b>4%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
2880	3560	4460	5040										
							1	3060	3770	4030			
WEIGHTED	SKEW =	.225					3	2360	2950	3210			
							7	1820	2170	2290			
							15	1280	1470	1550			
							30	1020	1180	1240			
							60	759	971	1070			
							90	637	870	994			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1973-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1080	707	502	375	290	232	147	91	47	27	20	16	13	9.9	7.7

## 14306036 MILL CREEK NEAR TOLEDO, OR

LOCATION.--Lat 44°34'35", long 123°54'25", in NW±NE± sec.33, T.11 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on left bank 1,200 ft downstream from diversion dam, and 3.5 mi southeast of Toledo.

DRAINAGE AREA. -- 4.18 mi2.

PERIOD OF RECORD.--October 1959 to September 1973.

GAGE.--Water-stage recorder. Altitude of gage is 80 ft, from topographic map. Prior to July 13, 1968, at site 1,200 ft upstream at different datum.

REMARKS.--Except for average discharge, figures not adjusted for diversion for city of Toledo municipal supply. Occasional fluctuation caused by city of Toledo diversion dam, capacity, 250 acre-ft.

COOPERATION.--Record of monthly diversion furnished by city of Toledo.

AVERAGE DISCHARGE.--14 years, 21.2  ${\rm ft^3/s}$ , 68.87 in/yr, 15,360 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 609 ft<sup>3</sup>/s Jan. 27, 1965, gage height, 5.83 ft, site and datum then in use, from rating curve extended above 65 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow Sept. 27, Oct. 3, 4, 1961, Sept. 26, 1962

## STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-	I E	NTERVAL, XCEEDANC	CFS, FOR IN YEARS E PROBABI	S, AND AN ILITY, IN	INUAL N	0 <b>N</b> -
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%		50 2 <b>%</b>	100 1%
OCTOBER	1.0	15	4.8	4.1	.85	1.9	1	.4	.1	.1	.1		
NOVEMBER	5.7	63	28	16	•56	11.1	3	. 4	.1	.1	.1		
DECEMBER	18	80	49	21	. 42	19.2	7	.5	.3	.2	- 1		
IANUARY	14	93	58	28	. 48	22.9	14	•6	.4	.3	.2		
EBRUARY	9.8	91	39	22	.55	15.4	30	.9	.5	.4	.3		
MARCH	10.0	72	35	18	.52	13.7	60	1.2	.7	.6	.5		
\PR!L	8.7	38	19	9.9	.52	7.5	90	1.4	.9	.7	•6		
MY	4.5	19	9.7	4.3	.45	3.8	120	1.8	1.2	.9	.8		
IUNE	1.8	18	5.4	4.2	.78	2.1	183	3.4	2.6	2.2	2.0		
IULY	.9	5.9	2.7	1.4	.54	1.0							
NUGUST	•5	3.4	1.6	.9	.55	.6							
SEPTEMBER	.4	4.8	1.9	1.4	.72	•7							
ANNUAL	13	28	21	4.4	.21	100							
MAGNI		PROBABILI D ON PERI				FLOW	MAG			BILITY OF OD OF REC			_DW

DISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, IN Y	R INDICAT EARS, AND BILITY. I	ANNUAL	
1.25 80%	2 50% 	5 20% 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE Days)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
287	363	464	529	610			1	246	714	770	450		
WEIGHTED	SKEW =	.129					3	246 192	314 233	370 266	452 315		
							7 15	148 111	174 133	191 146	212 159		
							30 60	81 62	97 78	105	114		
							90	54	67	87 74	96 80		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-73

 		DISCHA	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCEN	IT OF TIM	E		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 86	56	41	31	24	20	14	8.7	5.0	3.2	2.5	2.0	1.5	1.1	.7

153

# 14306100 NORTH FORK ALSEA RIVER AT ALSEA, OR

LOCATION.--Lat 44°22'45", long 123°35'40", in SE½ sec.1, T.14 S., R.8 W., Benton County, Hydrologic Unit 17100205, on left bank at Alsea, 0.2 mi upstream from bridge on Lobster Valley Road, 0.7 mi upstream from confluence with South Fork, and at mile 49.4.

DRAINAGE AREA .-- 63.0 mi2.

1080

724

522

403

325

267

PERIOD OF RECORD. -- October 1957 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 272.31 ft National Geodetic Vertical Datum of 1929.

 $\label{eq:REMARKS.--No regulation.} \textbf{REMARKS.--No regulation.} \textbf{ Some diversions by pumping above station.}$ 

AVERAGE DISCHARGE.--25 years, 281 ft<sup>3</sup>/s, 60.57 in/yr, 203,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.57 ft, from rating curve extended above 2,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 11.80 ft; minimum, 8.3 ft<sup>3</sup>/s June 8, Sept. 19, 1979.

## STATISTICAL SUMMARIES

,,	ONTHLY AN	ID ANNUAL	INDAN DIE	CHARGES	1958-82			BASE					
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	RS, AND	TED RECU ANNUAL N IN PERCE	0N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL	20 33 34 40 107 152 98	148 1137 1647 1327 1208 947 566	60 315 649 700 580 471 293	40 248 381 386 263 220 132	.66 .79 .59 .55 .45 .47	1.8 9.3 19.2 20.7 17.2 13.9 8.7	1 3 7 14 30 60 90	16 17 17 18 20 23 25	14 14 15 16 17 19 21	13 13 14 15 16 18	12 13 13 14 16 17	12 12 13 14 15 16	
MAY JUNE JULY AUGUST	67 39 26 17	360 137 52 46	151 71 36 25	69 23 7.5 6.0	.46 .33 .21 .24	4.5 2.1 1.1 .7	120 183	30 52	25 41 	23 36 	21 32	20 28 	
SEPTEMBER	15	66	29	13	. 44	.9							
		483 PROBABILI				100 	 MA G					L HIGH FI	
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANEC CORD 1958 CURRENCE	OUS PEAK F 3-82 INTERVAL, IN PERCEN	FLOW  , IN	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R CFS, FO	ECORD 1		RRENCE
DISCHARGE	TUDE AND BASE	PROBABILI D ON PERI	TY OF INOD OF RE	ISTANTANE( CORD 1958	OUS PEAK F 3-82 INTERVAL, IN PERCEN	FLOW	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R CFS, FO	ECORD 1	958-82  TED RECUI D ANNUAL	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1958 CURRENCE ABILITY,	OUS PEAK F 3-82 INTERVAL, IN PERCEN	FLOW IN	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 1  OR INDICA EARS, AN BILITY,  25	958-82 TED RECUID ANNUAL IN PERCEI	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INDOD OF RE	STANTANEC CORD 1958 CURRENCE BABILITY, 25 4% 0800 12	DUS PEAK F 3-82 INTERVAL IN PERCEN 50 2%	FLOW  IN  NT  100  1g	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASE  DISCH  2 50%  3640 2750 1990 1370 1050 818 718	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  5240 3900 2690 1790 1300 1050 915	CFS, FO AL, IN Y CE PROBA  10 10%  6280 4670 3120 2050 1420 1160 1000	R INDICA EARS, AN BILITY,  25 4\$  7570 5640 3630 2380 1550 1280	958-82 TED RECUID ANNUAL IN PERCEID 2%	100 19
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20% 7000	TY OF INDD OF RECATED RENCE PROB	ISTANTANEC CORD 1958 CURRENCE IABILITY, 25 4% 0800 12	DUS PEAK F 3-82 INTERVAL, IN PERCEN 50 2%	FLOW  TOO  THE TOO TOO TOO TOO TOO TOO TOO TOO TOO TO	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  3640 2750 1990 1370 1050 818 718  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$  5240 3900 1790 1300 1050 915  RD 1958-:	CFS, FC AL, IN Y CE PROBA  10 10 10 4670 3120 2050 1420 1160 1000	PR INDICA EARS, AN BILITY, 25 4%	958-82 TED RECUID ANNUAL IN PERCEID 2%	100 1%

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## 14306400 FIVE RIVERS NEAR FISHER, OR

LOCATION.--Lat 44°20'15", long 123°49'35", W-1/2 sec.19, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, in Siuslaw National Forest, on left bank at downstream side of abandoned highway bridge, 500 ft downstream from Lobster Creek, 3.2 mi north of Fisher, and at mile 3.3.

DRAINAGE AREA. -- 114 mi2.

PERIOD OF RECORD.--August 1958 to September 1963, October 1967 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--20 years, 556 ft<sup>3</sup>/s, 66.23 in/yr, 402,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 21.08 ft; minimum, 16 ft<sup>3</sup>/s Oct. 1, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 22.3 ft, from floodmarks, discharge, 19,000 ft<sup>3</sup>/s from rating curve extended above 10,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1961-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-82

	MINIMUM	MAYSMIN	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	0N-
Монтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	28	322	140	99	.71	2.1	1	26	22	21	20		
NOVEMBER	61	2308	717	554	.77	10.6	3	26	23	22	21		
DECEMBER	73	2393	1402	694	.50	20.7	7	27	24	23	22		
JANUARY	80	2671	1241	733	.59	18.3	14	28	25	24	23		
FEBRUARY	283	2363	1181	538	. 46	17.5	30	31	27	26	25		
MARCH	298	1854	936	440	.47	13.8	60	36	30	28	26		
APRIL	218	1117	574	274	.48	8.5	90	43	35	31	29		
MAY	137	631	283	139	.49	4.2	120	53	42	38	35		
JUNE	85	273	131	50	.38	1.9	183	95	72	62	55		
JULY	45	88	64	13	. 20	.9							
AUGUST	28	87	42	13	.32	.6							
SEPTEMBER	30	95	53	22	-41	.8							
ANNUAL	174	939	561	179	.32	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-82

DISCHARGE, YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-		INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
5960	8570	12400	15100	18600									
							1	6510	9300	11200	13600		
WEIGHTED	SKEW =	•067					3	5090	7090	8420	10100		
							7	3770	4910	5590	6390		
							15	2560	3290	3750	4310		
							30	2040	2520	2770	3030		
							60	1610	2060	2300	2540		
							90	1400	1820	2020	2210		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2230	1500	1090	836	650	532	356	223	129	79	63	52	43	36	29

14306500 ALSEA RIVER NEAR TIDEWATER, OR

155

LOCATION.--Lat 44°23'10", long 123°49'50", in NW½NW½ sec.6, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, on right bank 0.9 mi downstream from Grass Creek, 2.5 mi upstream from Scott Creek, 3.8 mi southeast of Tidewater, and at mile 21.0.

DRAINAGE AREA. -- 334 mi2.

PERIOD OF RECORD. -- October 1939 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 48.16 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1939, nonrecording gage at present site and datum.

REMARKS.--No regulation. Diversion for irrigation above station.

AVERAGE DISCHARGE.--43 years, 1,522 ft<sup>3</sup>/s, 61.88 in/yr, 1,103,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 27.44 ft; minimum, 45 ft<sup>3</sup>/s Sept. 26, 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on or about Feb. 3, 1890, reached a stage of 29.5 ft, from floodmark (discharge not determined).

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1940-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAF	R INDICAT RS, AND A BILITY,	ANNUAL N	0 <b>N</b> -
МОНТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	74	2521	417	472	1.13	2.3	1	75	62	 57	53	48	<b>4</b> 5
NOVEMBER	115	6058	1771	1289	.73	9.7	3	76	63	58	54	49	46
DECEMBER	182	7419	3446	1770	.51	18.8	7	78	6 <b>6</b>	60	56	51	49
JANUARY	211	7874	3721	1941	.52	20.3	14	82	69	63	59	54	52
FEBRUARY	607	6586	3324	1365	.41	18.1	30	89	75	68	63	<b>5</b> 9	56
MARCH	604	5144	2532	1083	.43	13.8	60	105	85	77	71	64	61
APRIL	<b>5</b> 50	3203	1529	700	.46	8.3	90	121	97	87	79	72	68
MAY	331	1848	801	377	.47	4.4	120	147	117	104	95	87	82
JUNE	178	724	373	132	.35	2.0	183	274	208	178	156	134	120
JULY	117	269	183	40	.22	1.0							
AUGUST	66	234	117	31	.27	.6							
SEPTEMBER	60	452	135	76	<b>.</b> 56	.7							
ANNUAL	431	2541	1522	410	•27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1940-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1940-82

		S, FOR II					PERIOD (CON-	DISC	INTER	N CFS, FO VAL, IN 'NCE PROB	YEARS, A	AUNNA DN	L
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1 <b>%</b>	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
15300	20600	27400	31500	36500	39900	43200							
							1	17000	22200	25300	28700	31000	33200
WEIGHTE	D SKEW =	221					3	13500	17800	20300	23200	25300	27200
							7	10000	13000	14700	16500	17800	18900
							15	7240	9180	10200	11300	12000	12600
							30	5670	6960	7510	7990	8240	8420
							60	4380	5500	6050	6580	6890	7150
							90	3910	4910	5370	5800	6030	6210

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60 <b>%</b>	70%	75 <b>%</b>	80 <b>%</b>	85 <b>%</b>	90%	95%
5930	3990	2930	2300	1840	1510	1010	638	374	224	176	141	119	100	83

#### 14306600 DRIFT CREEK NEAR SALADO, OR

LOCATION.--Lat 44°30'50", long 123°50'50", in NEt sec.24, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, on right bank 0.2 mi downstream from Cape Horn Creek, 4.1 mi southwest of Salado, 8.5 mi southeast of Toledo, and at mile 21.8.

DRAINAGE AREA .-- 20.5 mi2.

5%

447

10%

299

15%

225

20%

179

146

30%

122

88

PERIOD OF RECORD.--September 1958 to September 1963, June 1965 to September 1970.

GAGE.--Water-stage recorder. Altitude of gage is 460 ft, from topographic map.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--10 years (water years 1959-63, 1966-70), 120 ft<sup>3</sup>/s, 79.49 in/yr, 86,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft<sup>3</sup>/s Nov. 25, 1962, gage height, 8.34 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.11 ft; maximum gage height, 8.79 ft Dec. 4, 1966 (backwater from debris); minimum discharge, 3.8 ft<sup>3</sup>/s Sept. 7, 8, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1964 or January 1965, reached a stage of 9.86 ft, from floodmark in well, discharge, 4,050 ft<sup>3</sup>/s.

## STATISTICAL SUMMARIES

			MEAN		COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	CFS, FOF , IN YEAF CE PROBAG	RS, AND A	NNUAL N	-NC
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	9.7	89	<b>4</b> 5	30	.66	3.1	1						
10VEMBER	73	317	171	88	.52	11.8	3				`		
ECEMBER	108	400	224	95	.43	15.5	7						
ANUARY	76	488	262	143	• 55	18.1	14						
EBRUARY	154	510	274	109	.40	18.9	30						
MARCH	89	390	209	91	.43	14.5	60						
PRIL	61	232	116	53	.46	8.0	90						
4AY_	25	135	74	37	.50	5.1	120						
UNE	14	70	31	15	.48	2.1	183						
ULY	9.2	23	15 9.7	4.2 3.8	. 29	1.0	NOTE		·	00 05 043		DI E	
					• 39			FSS IHA	N 10 YEA	RS OF DAT	A AVAILA	MRLE.	
	5.8 5.4	19 62				.7 1.0	11012.						
SEPTEMBER	5.4 106	62 145 	15 120	16 11	1.08	1.0							
MAGNIT	5.4 106 TUDE AND BASE , IN CFS,	62	15 120 TY OF IN OD OF REC	16 11STANTANEC CORD 1959CURRENCE	1.08 .10 	1.0 100  FLOW		GNITUDE Base Disch	AND PROB D ON PER ARGE, IN INTERV	ABILITY COLOR OF RECORDS ABOUT THE PROBABLE COLOR OF THE PROBABLE	DF ANNUAL ECORD 19	. HIGH FI 159-70 ED RECUI	 RRENCE
)ISCHARGE, YEARS, A	106 TUDE AND BASE , IN CFS, AND ANNUA	62 145 PROBABILI D ON PERI FOR INDI L EXCEEDA	15 120 TY OF IN OD OF RECONCE PROBLEM	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON-SECU-	GNITUDE BASE DISCH	AND PROB D ON PER ARGE, IN INTERV	ABILITY ( 10D OF RE  CFS, FOR AL, IN YE	DF ANNUAL CORD 19 R INDICAT EARS, AND	. HIGH FI 159-70 ED RECUI O ANNUAL N PERCEI	RRENCE
MAGNIT ISCHARGE,	106 TUDE AND BASE , IN CFS,	62 145 PROBABILI D ON PERI FOR INDI	15 120 TY OF IN OD OF REC	16 11 STANTANEC CORD 1959 CURRENCE ABILITY,	1.08 .10 DUS PEAK 69-70 INTERVAL,	1.0 100 	PERIOD (CON-	GNITUDE Base Disch	AND PROB D ON PER ARGE, IN INTERV	ABILITY ( 10D OF RE CFS, FOR	DF ANNUAL ECORD 19	. HIGH FI 159-70 ED RECUI	RRENCE
MAGNITUSCHARGE, YEARS, A	106 TUDE AND BASE , IN CFS, AND ANNUA	62 145 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	15 120 TY OF IN OD OF RECONCE PROBLEM	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON- SECU- TIVE DAYS)	ONITUDE BASE DISCH	AND PROB D ON PER ARGE, IN INTERV. EXCEEDANG 5 20%	ABILITY ( IOD OF RE  CFS, FOR AL, IN YE  EPROBAE  10 10%	DF ANNUAL CORD 19 R INDICAT EARS, AND BILITY, I	HIGH FI 159-70 ED RECUI ANNUAL N PERCEI	RRENCE
MAGNIT	106 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	15 120 TY OF IN OD OF REI CATED REI NCE PROB.	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON-SECU-TIVE DAYS)	ONITUDE BASE DISCH	AND PROBA D ON PER ARGE, IN INTERV. EXCEEDAN. 5 20%	ABILITY (100 OF RECEPTION OF RE	PF ANNUAL CORD 19 R INDICAT ARS, AND BILLITY, 1 25 4%	HIGH FI 159-70 ED RECUI ) ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT	106 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	62 145 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	15 120 TY OF IN OD OF REI CATED REI NCE PROB.	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1360 1070	AND PROB. D ON PER  ARGE, IN INTERV. EXCEEDAN  1600 1200	ABILITY ( IOD OF RE  CFS, FOF AL, IN YE  E PROBAE  10 10 1750 1250	OF ANNUAL CORD 19 R INDICAT ARS, AND BILITY, 1 25 4%	HIGH FI 159-70 ED RECUI O ANNUAL N PERCEI 50 2%	RRENCE
MAGNITUSCHARGE, YEARS, A	106 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	15 120 TY OF IN OD OF REI CATED REI NCE PROB.	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	AND PROB D ON PER ARGE, IN INTERV. EXCEEDAN. 5 20%	ABILITY ( 10D OF RE  CFS, FOR  AL, IN YE  CE PROBAE  10  105  1750 1250 997	DF ANNUAL CORD 19 R INDICAT AND SILLITY, 1 25 4%	. HIGH FI	RRENCE
MAGNITUSCHARGE, YEARS, A	106 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	15 120 TY OF IN OD OF REI CATED REI NCE PROB.	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  DISCH  2  50  1360 1070 780 562	AND PROB D ON PER ARGE, IN INTERV. EXCEEDANG 5 20% 1600 1200 914 692	ABILITY (10D OF RECEPTED AL, IN YECE PROBAE 10 10% 1750 1750 1997 7774	DF ANNUAL CORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	HIGH FI 159-70 ED RECUI O ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT	106 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	15 120 TY OF IN OD OF REI CATED REI NCE PROB.	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1360 1070 780 562 413	AND PROB. D ON PER  ARGE, IN INTERV. EXCEEDAN  1600 1200 914 692 496	ABILITY ( IOD OF RE  CFS, FOR AL, IN YE CE PROBAE  10 10 1750 1250 997 774 551	OF ANNUAL CORD 19 R INDICAT ARS, AND BILITY, 1 25 4%	. HIGH FI	 RRENCE
MAGNIT	106 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	15 120 TY OF IN OD OF REI CATED REI NCE PROB.	16 11 STANTANECORD 1959 CURRENCE ABILITY, 25	1.08 .10 DUS PEAK F 9-70 INTERVAL, IN PERCEI	1.0 100 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  DISCH  2  50  1360 1070 780 562	AND PROB D ON PER ARGE, IN INTERV. EXCEEDANG 5 20% 1600 1200 914 692	ABILITY (10D OF RECEPTED AL, IN YECE PROBAE 10 10% 1750 1750 1997 7774	DF ANNUAL CORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	. HIGH FI	RRENCE

50%

60

37

70% 75%

17

14

11

22

95%

6.7

8.6

## 14306700 NEEDLE BRANCH NEAR SALADO, OR

LOCATION.--Lat 44°30'55", 123°51'20", in SW½ sec.24, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, on right bank 500 ft upstream from mouth, 4.6 mi west of Salado, and 8.5 mi southeast of Toledo.

DRAINAGE AREA.--0.27 mi<sup>2</sup>, computed as 174.64 acres on basis of field survey by Oregon State University.

PERIOD OF RECORD. -- October 1958 to September 1973.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 440 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

4.3 3.1 2.5

AVERAGE DISCHARGE.--15 years, 1.64 ft<sup>3</sup>/s, 82.49 in/yr, 1,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64 ft³/s Jan. 11, 1972, gage height, 3.75 ft; minimum, 0.01 ft³/s Sept. 8, 9, 1962, Sept. 18 to Oct. 3, 1965, Aug. 17, Sept. 14, 23-28, 1967, many days in August and September 1970, Aug. 26, 1971, many days in August and September 1972, several days in August and September 1973.

## STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF		PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.1	1.9	.6	.6	1.07	2.9	1	0.0	0.0	0.0	0.0		
10VEMBER	.8	4.6	2.6	1.2	.48	13.3	3	0.0	0.0	0.0	0.0		
DECEMBER	1.2	7.8	3.9	2.0	.52	19.8	7	0.0	0.0	0.0	0.0		
IANUARY	.8	7.1	4.3	2.1	.49	21.9	14	0.0	0.0	0.0	0.0		
EBRUARY	.7	6.2	2.9	1.4	.47	14.9	30	0.0	0.0	0.0	0.0-		
MARCH	.7	4.5	2.6	1.1	.43	13.0	60	.1	0.0	0.0	0.0		
PRIL	•6	2.7	1.4	.7	.53	7.1	90	.1	0.0	0.0	0.0		
1AY	.2	1.8	.8	.4	.56	3.9	120	.1	.1	0.0	0.0		
JUNE	.1	1.1	.3	.2	.70	1.7	183	.3	.2	.1	.1		
JULY	.1	.4	.1	.1	•69	•7							
\UGUST	0.0	•2	-1	0.0	.67	•3							
SEPTEMBER	0.0	.7	.1	•2	1.38	.7							
NNUAL	1.1	2.5	1.6	.4	.23	100							
MAGNIT		PROBABILI D ON PERI				FLOW	MAG			BILITY OF DD OF REC			.ow
SCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF REC	CURRENCE	INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASED DISCHAF	ON PERIOR RGE, IN O		ORD 195	9-73  D RECUR ANNUAL	RENCE
SCHARGE,	BASE IN CFS,	D ON PERI	OD OF REC	CORD 1959 CURRENCE	INTERVAL IN PERCE	. IN	PERIOD (CON- SECU- TIVE	BASED  DISCHAR  EX	ON PERIOR ON PER	OD OF REC CFS, FOR , IN YEA E PROBABI	ORD 195 INDICATE RS, AND LITY, IN	9-73 D RECURANNUAL PERCEN	RENCE
OISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU-	BASED DISCHAR	ON PERIO	OD OF REC	ORD 195  INDICATE RS, AND LITY, IN	9-73 D RECURANNUAL PERCEN	RENCE
1.25 80%	BASE IN CFS, IND ANNUA 2 50%	FOR INDI	OD OF REC	CORD 1959 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE	BASED  DISCHAR  EX	ON PERIOR ON PER	OD OF REC CFS, FOR , IN YEA E PROBABI	ORD 195 INDICATE RS, AND LITY, IN	9-73 D RECURANNUAL PERCEN	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CORD 1959 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAFE)	ON PERIO	DD OF REC CFS, FOR -, IN YEA E PROBABI 10 10%	INDICATE RS, AND LITY, IN 25 4%	9-73 D RECURANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CORD 1959 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAFE EX 2 50%	ON PERIO	OD OF REC CFS, FOR , IN YEA E PROBABI 10 10%	INDICATE RS, AND LITY, IN 25 4%	9-73 D RECUFANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CORD 1959 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DI SCHAF  E)  2  50%  21 15	ON PERIO	DD OF REC CFS, FOR , IN YEA E PROBABI 10 10%	INDICATE RS, AND LITY, IN 25 4% 43 26	9-73 D RECURANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CORD 1959 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHAR  E)  2  50%  21  15  11	ON PERIO	DD OF REC CFS, FOR , IN YEA E PROBABI 10 10%	ORD 195	9-73 D RECUFANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CORD 1959 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	BASED  DISCHAF  E)  2  50%  21  15  11  8-2	ON PERIO	OD OF REC CFS, FOR -, IN YEA E PROBABI 10 10% 33 22 15	195 INDICATE RS, AND LITY, IN 25 4% 43 26 17 13	9-73 D RECUFANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CORD 1959 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAR  E)  2  50%  21  15  11  8.2  6.1	ON PERIO	DD OF REC DD OF REC	ORD 195	9-73 D RECUFANNUAL PERCEN 50 2%	T 100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA 5 20%	OD OF REC	CURRENCE BILITY,  25 44	INTERVAL IN PERCE	, IN NT 1000 1%	PERIOD (CON- SECU- TIVE DAYS)	DI SCHAFE  E)  2  50%  21  15  11  8.2  6.1  4.6  4.1	ON PERIO ON PERIO INTERVAL (CEEDANCE 5 20% 27 19 14 10 7.5 6.0 5.1	DD OF REC CFS, FOR , IN YEA E PROBABI 10 10% 33 22 15 11 8.3 6.9 5.8	ORD 195	9-73 D RECUFANNUAL PERCEN 50 2%	T 100
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIVIDUAL EXCEEDA  5 20%  39 .394	OD OF RECONCE PROBA- 10 10% 45	CURRENCE BILITY,  25 4%  54	INTERVAL IN PERCE 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAFE  2 50%  21 15 11 8.2 6.1 4.6 4.1  OF RECORD	ON PERIO GRE, IN ( INTERVAL (CEEDANCE 5 20% 27 19 14 10 7.5 6.0 5.1	OD OF REC CFS, FOR , IN YEA E PROBABI 10 10% 	INDICATE RS, AND LITY, IN 25 4%	9-73 D RECUFANNUAL PERCEN 50 2%	T 100

1.9 1.6 1.0 .7 .4 .2 .1 .1 .1

0.0

.1

# 14306800 FLYNN CREEK NEAR SALADO, OR

LOCATION.--Lat 44°32'20", long 123°51'05", in SWt sec.12, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, on right bank 1,000 ft upstream from mouth, 3.4 mi west of Salado, and 6.9 mi southeast of Toledo.

DRAINAGE AREA.--0.78 mi<sup>2</sup>, computed as 501.96 acres on basis of field survey by Oregon State University.

PERIOD OF RECORD.--September 1958 to September 1973.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 685 ft, from topographic map.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1959-73), 4.37 ft<sup>3</sup>/s, 76.08 in/yr, 3,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 139 ft<sup>3</sup>/s Jan. 11, 1972, gage height, 4.73 ft; minimum, 0.07 ft<sup>3</sup>/s Sept. 27, 1967.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-73

	MINIMIN	MAVIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	ŀ	NTERVAL,	IN YEAR	INDICATES, AND A	NNUAL N	ON-
ионтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
CTOBER	.2	3.2	1.0	.9	.90	1.8	1	.2	.1	.1	.1		
OVEMBER	1.0	11	5.7	3.3	. 58	10.7	3	.2	.1	.1	.1		
ECEMBER	4.4	21	9.6	4.7	. 49	18.1	7	.2	.1	.1	. 1		
ANUARY	3.2	18	12	5.5	.46	22.4	14	.2	. 1	.1	. 1		
EBRUARY	2.0	19	8.7	4.1	.47	16.4	30	.2	.2	.1	. 1		
ARCH	2.7	15	7.3	3.6	.50	13.7	60	.3	.2	.1	. 1		
PRIL	1.8	8.3	4.2	2.0	.48	8.0	90	.3	.2	.2	.2 -		
AY	.9	5.3	2.4	1.3	.52	4.6	120	.4	.3	.2	•2		
UNE	.5	3.2	1.1	.7		2.1	183	.8	.5	.4	. 4		
ULY	.3	1.2	.5	.2	.42	1.0							
		.5	.3	.1		.5							
	.1												
UGUST	.1	1.4	.4	.3	. 86	.7							
NUGUST SEPTEMBER NNUAL	.1 2.7 	6.3 PROBABILI	.4 4.4 	.8 .8 STANTANE	.19 	100	 MAG				F ANNUAL		
UGUST EPTEMBER NNUAL MAGNIT	2.7 TUDE AND BASE , IN CFS,	PROBABILITO ON PERIO	.4 4.4 TY OF INS	.3 .8 STANTANE CORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100 FLOW , IN	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RE  CFS, FOR L, IN YE	F ANNUAL CORD 199 INDICATI ARS, AND	59-73 ED RECUI	RRENCE
UGUST EPTEMBER  NNUAL  MAGNIT  ISCHARGE, YEARS, A	2.7 TUDE AND BASE , IN CFS,	PROBABILITO ON PERIOR	4.4  TY OF INS DD OF REC  CATED REC  NCE PROBA	.3 .8 STANTANEC CORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU-	BASED DISCHA E	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 199	59-73 ED RECUI ANNUAL N PERCEI	RRENCE
UGUST EPTEMBER  NNUAL  MAGNIT  I SCHARGE, YEARS, A	2.7 TUDE AND BASE , IN CFS,	PROBABILITO ON PERIO	.4 4.4 TY OF INS	.3 .8 STANTANE CORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100 FLOW , IN	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RE  CFS, FOR L, IN YE	CORD 199	59-73 ED RECUI	RRENCE
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	2.7 TUDE AND BASE , IN CFS,	PROBABILITO ON PERIOR	4.4  TY OF INS DD OF REC  CATED REC  NCE PROBA	.3 .8 STANTANEC CORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	INDICATI ARS, AND ILITY, II	59-73 ED RECUI ANNUAL N PERCEI	RRENCE
UGUST EPTEMBER NNUAL MAGNIT	LUDE AND BASE TIN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD  FOR INDICAL EXCEEDAT  5 20%	.4 4.4 TY OF INS DD OF REC CATED REC NCE PROBA	.3 .8 STANTANEGORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	RGE, IN INTERVA XCEEDANC	OD OF RECEIVED OF	INDICATI ARS, AND ILITY, II	59-73 ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
JGUST EPTEMBER NNUAL MAGNII ISCHARGE, YEARS, A	LUDE AND BASE TIN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD FOR INDICAL EXCEEDAL	.4 4.4 TY OF INS DD OF REC CATED REC NCE PROBA	.3 .8 STANTANEGORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  45 36	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	100 19: INDICATI ARS, AND ILITY, II  25 4%  97 67	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
JGUST EPTEMBER NNUAL MAGNIT SCHARGE, YEARS, A 1.25 80%	LUDE AND BASE TIN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD  FOR INDICAL EXCEEDAT  5 20%	.4 4.4 TY OF INS DD OF REC CATED REC NCE PROBA	.3 .8 STANTANEGORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED  DISCHA  E  2  50%  45  36  29	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 60 46 34	OD OF RECEIVED OF	INDICATI ARS, AND ILITY, II 25 4% 97 67 44	59-73 ED RECUI ANNUAL N PERCEI 50 2%	RRENCI
JGUST EPTEMBER NNUAL MAGNIT SCHARGE, YEARS, A 1.25 80%	LUDE AND BASE TIN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD  FOR INDICAL EXCEEDAT  5 20%	.4 4.4 TY OF INS DD OF REC CATED REC NCE PROBA	.3 .8 STANTANEGORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  45 36 29 22	ON PERI ON PERI RGE, IN INTERVA EXCEEDANC 5 20% 60 46 34 27	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10 74 54 38 30	ORD 19: INDICATI ARS, AND ILITY, II  25 4%  97 67 44 33	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
UGUST EPTEMBER NNUAL MAGNIT	LUDE AND BASE TIN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD  FOR INDICAL EXCEEDAT  5 20%	.4 4.4 TY OF INS DD OF REC CATED REC NCE PROBA	.3 .8 STANTANEGORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DI SCHA  E 2 50\$  45 36 29 22 16	RGE, IN INTERVA XCEEDANC 5 20% 60 46 34 27 19	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10 10 74 54 38 30 21	ORD 199 INDICATI ARS, AND ILITY, II 25 4% 97 67 44 33 23	59-73 ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A 1.25 80%	LUDE AND BASE TIN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD  FOR INDICAL EXCEEDAT  5 20%	.4 4.4 TY OF INS DD OF REC CATED REC NCE PROBA	.3 .8 STANTANEGORD 1959 CURRENCE ABILITY,	. 19 OUS PEAK 9-73 INTERVAL IN PERCE	100  FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  45 36 29 22	ON PERI ON PERI RGE, IN INTERVA EXCEEDANC 5 20% 60 46 34 27	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10 74 54 38 30	ORD 19: INDICATI ARS, AND ILITY, II  25 4%  97 67 44 33	59-73 ED RECUI ANNUAL N PERCEI 50 2%	RRENCE

		DISCH	ARGE, II	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	D PERCEN	IT OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
18	12	8.7	6.7	5.3	4.3	3.1	2.0	1.2	.7	.5	.4	.3	.2	.2

## 14306810 DEER CREEK NEAR SALADO, DR

LOCATION.--Lat 44°32'05", long 123°52'35", in SW‡ sec.11, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, Siuslaw National Forest, on right bank 1,000 ft upstream from mouth, 4.6 mi west of Salado, and 6.5 mi southeast of Toledo.

DRAINAGE AREA.--1.17 mi<sup>2</sup>, computed as 749.5 acres on basis of field survey by Oregon State University.

PERIOD OF RECORD. -- September 1958 to September 1973.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 600 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

25

17

13

9.6

7.8

6.4

4.5

2.9

1.9

1.1

.8

•6

.5

. 4

AVERAGE DISCHARGE.--15 years (water years 1959-73),  $6.49 \text{ ft}^3/\text{s}$ , 75.33 in/yr, 4,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201 ft³/s Jan. 28, 1965, gage height, 4.21 ft; maximum gage height, 4.39 ft Jan. 20, 1972 (backwater from log); minimum discharge, 0.15 ft³/s Sept. 2, 14-16, 1972.

## STATISTICAL SUMMARIES

		ID ANNUAL	MEAN DISC	CHARGES	1959-73		MAG	NITUDE A BASED			CORD 19		
	M	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	IN YEAR	INDICAT S, AND A	NNUAL N	ON-
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	<b>2</b> 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER NOVEMBER	.3 2.5	5.0 17	1.9	1.5 4.7	.79 .52	2.4	1 3	.3	.2	.2	.2		
DECEMBER	5.9	30	14	6.7	.48	17.9	7	•3	.2	•2	.2		
JANUARY FEBRUARY	4.5 2.9	28 28	17 12	8.3 5.9	. 48 . 49	22.2	14 30	.3	.3	•2	•2		
MARCH	3.5	20 21	10	5.2	.50	15.6 13.3	60	.4	.3	.2	•2.		
APRIL	2.7	11	6.0	2.8	.47	7.7	90	.5	.4	.3	.3		
MAY	1.2	7.0	3.5	1.7	.50	4.4	120	.6	.4	.4	.3		
JUNE	.7	5.1	1.8	1.1	.60	2.3	183	1.3	.9	.8	.7		
JULY	.5	1.9	.8	.4	.46	1.1							
AUGUST	.3	1.2	.5	.2	.46	.6							
SEPTEMBER	.3	2.7	•7	•7	.89	.9							
					40								
ANNUAL  MAGNI		9.1 PROBABILI D ON PERIO				100  FLOW	MAG	NITUDE AI BASED			F ANNUAL CORD 19		 LOW
MAGNIT	TUDE AND BASE	PROBABILI	TY OF INS	STANTANEC CORD 1959 CURRENCE	DUS PEAK F D-73	FLOW	MAG PERIOD (CON-	BASED DISCHAI	ON PERI	OF REI		59-73  ED RECUR ANNUAL	 RRENCE
MAGNIT	TUDE AND BASE	PROBABILI D ON PERIO	TY OF INS	STANTANEC CORD 1959 CURRENCE	DUS PEAK F D-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU-	BASED DISCHAI	ON PERI	OF REI	CORD 19 INDICAT ARS, AND ILITY, I	59-73  ED RECUR ANNUAL	RRENCE
MAGNI	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INSOD OF REC	STANTANEC CORD 1959 CURRENCE ABILITY,	DUS PEAK F 0-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON-	BASED  DISCHAI	ON PERI	OD OF REC	CORD 19  INDICAT ARS, AND	59-73 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNI	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INSOD OF REC	STANTANEC CORD 1959 CURRENCE ABILITY,	DUS PEAK F 0-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE	BASED  DISCHAI  E)  2  50%	ON PERIOR ON PER	OD OF REC CFS, FOR L, IN YE. E PROBAB	CORD 19 INDICAT ARS, AND ILITY, II	59-73 ED RECUF ANNUAL N PERCEN	100
MAGNITION OF THE PROPERTY OF T	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1959 CURRENCE ABILITY,	DUS PEAK F 0-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI	ON PERI	OD OF RECEPTOR OF	CORD 19  INDICAT ARS, AND ILITY, I	59-73 ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNITURE NAME OF THE NAME OF	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1959 CURRENCE ABILITY,	DUS PEAK F 0-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI  E)  2  50%	ON PERIOR OF THE	CFS, FOR L, IN YE E PROBAB	CORD 19 INDICAT ARS, AND ILITY, II 25 4%	59-73 ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNITION IN CONTRACT OF THE PROPERTY OF THE P	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1959 CURRENCE ABILITY,	DUS PEAK F 0-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E) 2 50%	ON PERIOR OF THE	CFS, FOR L, IN YE E PROBAB 10 10%	1NDICAT ARS, AND ILITY, II 25 4%	59-73  ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1959 CURRENCE ABILITY,	DUS PEAK F 0-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI  2 50%  70 54 42	ON PERIOD ON PER	OD OF RECORD OF	1NDICAT ARS, AND ILITY, II 25 4% 154 104 68	59-73  ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNITURE NAME OF THE NAME OF	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1959 CURRENCE ABILITY,	DUS PEAK F 0-73 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60	DISCHAI E) 2 50\$ 70 54 42 32 24 18	ON PERIOR OF PER	DD OF REI	190 CORD 19	59-73  ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF INSOD OF RECONCE PROBA	STANTANEC SORD 1959 SURRENCE BILITY, 25 4%	DUS PEAK I D-73 INTERVAL IN PERCEI	FLOW  , IN  NT  100  1,5	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI  E)  70 54 42 32 24 18 16	ON PERIOD ON PER	CFS, FOR L, IN YE. E PROBAB  10 10 10 17 83 58 44 31 26 22	CORD 19 INDICAT ARS, AND ILITY, I 25 4% 154 104 68 49 35	59-73  ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNITUSCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF INSOD OF RECONCE PROBA	STANTANEC SORD 1959 SURRENCE BILITY, 25 4%	DUS PEAK I D-73 INTERVAL IN PERCEI	FLOW  , IN  NT  100  1,5	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60	DISCHAI  E)  70 54 42 32 24 18 16	ON PERIOD ON PER	CFS, FOR L, IN YE. E PROBAB  10 10 10 17 83 58 44 31 26 22	190 CORD 19	59-73  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100
MAGNITURE NAME OF THE NAME OF	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS OD OF REC  CATED REC  NCE PROBA  10  10%  158	STANTANEC CORD 1959 CURRENCE BILITY, 25 4%	DUS PEAK F 1)-73 INTERVAL IN PERCEI 50 2%	FLOW  TOO  THE STATE OF THE STA	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI  E)  2  50%  70  54  42  32  24  18  16  OF RECORU	95 69 51 40 29 23 19 0 1959-7	CFS, FOR L, IN YE. E PROBAB  10 10 10 117 83 58 44 31 26 22	100 CORD 19  INDICAT ARS, AND ILITY, II  25 4%  154 104 68 49 35 29 25	59-73  ED RECUF ANNUAL N PERCEN 50 2%	 RRENCE

#### BIG CREEK BASIN

# 14306900 BIG CREEK NEAR ROOSEVELT BEACH. OR

LOCATION.--Lat 44°10'05", long 124°03'55", in SEtSEt sec.13, T.16 S., R.12 W., Lane County, Hydrologic Unit 17100205, on right bank 1.0 mi downstream from Frying Pan Creek, 2.5 mi east of Roosevelt Beach.

DRAINAGE AREA. -- 11.9 mi2.

PERIOD OF RECORD. -- October 1972 to September 1982.

GAGE. -- Water-stage recorder. Altitude of gage is 141 ft, by barometer.

REMARKS.--No regulation or diversion above station.

7.7

40

ANNUAL

29

158

AVERAGE DISCHARGE. -- 10 years, 92.9 ft3/s, 106.02 ln/yr, 67.310 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1973-82

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft<sup>3</sup>/s Nov. 30, 1975, gage height, 6.90 ft; minimum, 3.8 ft<sup>3</sup>/s Oct. 15, 1979.

## STATISTICAL SUMMARIES

DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-DARD COEFFI-PERIOD PERCENT DEVIA-CIENT OF (CON-EXCEEDANCE PROBABILITY, IN PERCENT TION MINIMUM MAXIMUM MEAN VARI-ANNUAL SECU-MONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 100 20% DAYS) 50% 10% 5% 2% 1% OCTOBER 29 137 24 2.6 5.7 67 .82 NOVEMBER 20 12.2 386 116 .85 DECEMBER 20 398 244 109 .45 21.8 JANUARY 27 287 182 97 .53 16.3 FEBRUARY 56 308 174 90 .52 30 MARCH 49 269 62 . 44 12.5 60 \_\_ --APRIL 50 153 92 31 . 34 8.2 90 MAY 27 13 86 49 21 . 43 4.4 120 JUNE 56 30 13 .43 2.7 183 JULY 8.6 46 18 11 . 59 1.6 AUGUST . 39 NOTE: LESS THAN 10 YEARS OF DATA AVAILABLE. 6.0 18 11 3.5 .9 1.3 SEPTEMBER

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1973-82

14

93

8.4

33

.60

.35

100

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1973-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1974-82

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	I CFS, FOF AL, IN YE	ARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
720	1070	1570	1900										
							1	872	1170	1340			
WEIGHTED	SKEW =	199					3	690	900	1010			
							7	533	670	738			
							15	403	493	539			
							30	324	396	432			
							60	249	321	363			
							90	215	292	336			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1973-82

 		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TH	4E		
 5%	10%	15%	20%	25%	30%	40%	50%	6 <b>0%</b>	70%	75%	80%	85%	90%	95%
353	241	183	144	115	92	61	42	29	19	15	13	10	8.3	6.7

# 14307500 LAKE CREEK AT TRIANGLE LAKE, OR

LOCATION.--Lat 44°09'40", long 123°34'10", in SW± sec.20, T.16 S., R.7 W., Lane County, Hydrologic Unit 17100206, on right bank 500 ft downstream from outlet of Triangle Lake and 3.0 ml southwest of Blachly.

DRAINAGE AREA .-- 52.5 mi2.

PERIOD OF RECORD. -- August 1931 to September 1955.

GAGE.--Water-stage recorder. Datum of gage is 672.75 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by natural storage in Triangle Lake. No diversion above station.

AVERAGE DISCHARGE.--24 years (water years 1932-55), 210 ft<sup>3</sup>/s, 152,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft<sup>3</sup>/s Feb. 18, 1949, gage-height, 8.33 ft, from rating curve extended above 2,400 ft<sup>3</sup>/s by logarithmic plotting; maximum gage height, 8.68 ft Feb. 18, 1949 (backwater from debris); minimum discharge, 2.7 ft<sup>3</sup>/s Aug. 1, 1944; minimum daily, 4.2 ft<sup>3</sup>/s Oct. 18, 19, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of 7.7 ft, from floodmark, discharge, 3,600 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1932-55 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-55

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTEŔVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.5	360	52	76	1.46	2.1	1	9.6	7.1	6.1	5.4		
NOVEMBER	9.7	573	226	174	.77	8.9	3	9.6	7.2	6.2	5.5		
DECEMBER	79	927	426	247	.58	16.8	7	9.9	7.4	6.3	5.6		
JANUARY	162	912	508	222	.44	20.1	14	10	7.7	6.7	5.9		
FEBRUARY	160	939	500	201	.40	19.8	30	11	8.4	7.3	6.5		
MARCH	98	794	362	162	. 45	14.3	60	13	9.6	8.4	7.6		
APRIL	78	551	224	117	•52	8.9	90	14	11	9.4	8.5		
MAY	37	276	117	62	.53	4.6	120	18	13	11	9.6		
JUNE	27	149	58	32	.56	2.3	183	35	24	20	16		
JULY	15	61	27	11	.41	1.1							
AUGUST	6.9	30	15	5.7	.38	.6							
SEPTEMBER	8.5	55	16	9.9	•62	.6							
ANNUAL	120	303	210	50	. 24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1932-55

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-55

DISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	'AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25	2	5	10	25	50	100	SECU-						
80%	50% 	20%	10%	4% 	2% 	1%	TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 4%	50 2%	100 1%
1440	2220	3300	4010	4900									
							1	2140	3110	3680	4330		
WEIGHTED	SKEW =	286					3	1760	2460	2860	3320		
							7	1330	1820	2090	2390		
							15	1030	1300	1420	1520		
							30	804	951	998	1030		
							60	620	737	782	816		
							90	553	672	724	769		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-55

	DI	SCHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TI	ME		
5% 10	<b>%</b> 15 <b>%</b>	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
807 555	413	333	275	227	144	89	52	30	23	19	15	13	10

## SIUSLAW RIVER BASIN

# 14307580 LAKE CREEK NEAR DEADWOOD, OR

LOCATION.--Lat 44°04'58", long 123°47'05", in NWŁNWŁ sec.21, T.17 S., R.9 W., Lane County, Hydrologic Unit 17100206, on right bank 0.2 mi upstream from Indian Creek, 1.5 mi southwest of Deadwood, and at mile 2.6.

DRAINAGE AREA. -- 174 mi 2.

PERIOD OF RECORD. -- October 1967 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 178.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow slightly regulated by natural storage in Triangle Lake. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 726  $ft^3/s$ , 56.66 in/yr, 526,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 15.86 ft; minimum, 12 ft<sup>3</sup>/s Aug. 14, 15, 17, 18, 1977.

#### STATISTICAL SUMMARIES

YEARS, 1.25 80% 6570	AND ANNUA 2 50%	014	NCE PROE	25 4% 2700 2700 N TABLE	IN PERCEI	100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  EXCEEDED FOR	7520 6300 4870 3480 2770 2150 1880	INTERV EXCEEDAN 5 20≸ 111100 9060 6440 4420 3380 2770 2480	13700 1090 1090 13700 10900 7400 4980 3680 3090 2770	DR INDICAT YEARS, AND ABILITY, I 25 4\$ 17200 13400 8530 5630 3970 3420 3050	ANNUAL	
YEARS, 4 1.25 80% 6570	2 50% 9840	5 20% 14700 1	10 10% 8200 2	25 25 4% 2700	1N PERCEI	100 1%	(CON- SECU- TIVE DAYS) 	7520 6300 4870 3480 2770 2150 1880	11100 9060 6440 4420 3380 2770 2480	10 10% 10% 13700 10900 7400 4980 3680 3090 2770	YEARS, AND ABILITY, I	50 2%	100 1%
1.25 80%	2 50% 9840	5 20% 14700 1	NCE PROB 10 10%	25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS) 	7520 6300 4870 3480 2770 2150	11100 9060 6440 4420 3380 2770	10 10% 10% 13700 10900 7400 4980 3680 3090	YEARS, AND ABILITY, I	50 2%	100 19
1.25 80%	2 50% 9840	5 20% 14700 1	NCE PROB 10 10%	25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS) 1 3 7 15	7520 6300 4870 3480 2770	1NTERV EXCEEDAN 5 20% 11100 9060 6440 4420 3380	10 10% 10% 13700 10900 7400 4980 3680	YEARS, AND ABILITY, I 25 4% 17200 13400 8530 5630 3970	50 2%	100 19
YEARS, 1.25 80% 6570	2 50% 9840	5 20% 14700 1	NCE PROB 10 10%	25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS) 1 3 7	7520 6300 4870 3480	1NTERV EXCEEDAN 5 20% 11100 9060 6440 4420	10 10% 10% 13700 10900 7400 4980	YEARS, AND ABILITY, I 25 4% 17200 13400 8530 5630	50 2%	100 19
1.25 80%	2 50% 9840	5 20% 14700 1	NCE PROB 10 10%	25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	7520 6300 4870	1NTERV EXCEEDAN 5 20% 11100 9060 6440	10 10 10% 13700 10900 7400	YEARS, AND ABILITY, I 25 4% 17200 13400 8530	50 2%	100 19
YEARS, 1.25 80% 6570	2 50% 9840	5 20% 14700 1	NCE PROB 10 10%	25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	2 50% 7520 6300	1NTERV EXCEEDAN 5 20% 11100 9060	10 10% 13700 10900	YEARS, AND ABILITY, I 25 4% 17200 13400	ANNUAL N PERCEN 50 2%	100 1;
YEARS, 7	AND ANNUA 2 50%	5 20%	NCE PROB 10 10%	25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE DAYS)	2 50%	INTERVEXCEEDAN	10 10%	YEARS, AND ABILITY, I 25 4%	ANNUAL N PERCEN 50 2%	100 1;
YEARS, 7	AND ANNUA 2 50%	5 20%	NCE PROB 10 10%	25 4%	IN PERCEI	NT 100	(CON- SECU- TIVE	2	INTERV EXCEEDAN 5	AL, IN Y ICE PROBA	YEARS, AND ABILITY, I  25	ANNUAL N PERCEN 50	IT 
YEARS, 1	AND ANNUA	AL EXCEEDA 5	NCE PROB	ABILITY, 25	IN PERCEI	NT 100	(CON- SECU- TIVE	2	INTERV EXCEEDAN 5	AL, IN Y ICE PROBA	YEARS, AND ABILITY, I  25	ANNUAL N PERCEN 50	IT 
YEARS,	AND ANNUA	AL EXCEEDA	NCE PROB	ABILITY,	IN PERCEI	NT 	(CON-	DISCH	INTERV	'AL, ÎN '	YEARS, AND	ANNUAL	
								DISCH	INTERV	'AL, ÎN '	YEARS, AND	ANNUAL	
) I SCHAPGE	IN CEC	EOD INDI		CUDDENCE	INTERVAL							ED BECHE	
MAGNI		PROBABILI ED ON PERI				FLOW	MAC				OF ANNUAL RECORD 19		WO.
ANNUAL	215	1239	726 <del>-</del>	263 	.36	100							
SEPTEMBER	26	122	61	29	. 48	.7							
AUGUST	23	99	42	18	.44	.5							
JULY	35	97	68	17	.24	.8							
MAY JUNE	181 101	585 304	327 154	126 55	.39 .36	3.7 1.8	120 183	57 108	44 82	39 70	36 62		_
APRIL	285	1501	751	348	.46	8.6	90	46	35	31	28		-
MARCH	396	2235	1196	598	.50	13.7	60	38	29	26	24		-
EBRUARY	338	2260	1515	641	.42	17.3	30	32	24	21	19		-
JANUARY	92	3343	1820	966	•53	20.8	14	28	21	18	16		_
DECEMBER	77	3272	1901	972	.51	21.7	7	26	20	17	15		_
OCTOBER NOVEMBER	26 87	391 2654	147 766	111 676	.76 .88	1.7 8.8	1 3	25 25	19 19	16 17	14 14		
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100
	MINIMUM		MEAN	DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL EXCEEDAN	, IN YE	ARS, AND A ABILITY, I	NNUAL NO	N- IT
				STAN-				DISC	ARGE. IN	CES. FO	OR INDICAT	ED RECUE	RENCI
							. ***				RECORD 19		
Mı	ONTHLY AN	ND ANNUAL	MEAN DIS	CHARGES	1968-82		MAG				OF ANNUAL RECORD 19		W

## 163 SIUSLAW RIVER BASIN 14307620 SIUSLAW RIVER NEAR MAPLETON, OR

LOCATION.--Lat 44°03'45", long 123°52'55", in SW±NW± sec.27, T.17 S., R.10 W., Lane County, Hydrologic Unit 17100206, on right bank 250 ft above Shoemaker Creek, 2.5 mi northwest of Mapleton, and at mile 23.7.

DRAINAGE AREA .-- 588 mi2.

8950

5920

4170

3170

2490

2010

1330

826

497

296

236

193

160

132

97

PERIOD OF RECORD. -- October 1967 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 41 ft, from topographic map.

REMARKS.--No regulation or diversions above station.

AVERAGE DISCHARGE.--15 years, 2,159 ft<sup>3</sup>/s, 49.86 in/yr, 1,564,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 28.45 ft; minimum, 45 ft<sup>3</sup>/s Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of about 28 ft, from information by local residents (discharge not determined).

#### STATISTICAL SUMMARIES

												<b>.</b>	DW.
М	ONTHLY AN	ND ANNUAL	MEAN DIS	SCHARGES	1968-82		MA				OF ANNUAL RECORD 19		
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICATARS, AND A	ANNUAL NO	)N-
НТИОМ	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 <b>20%</b>	10 10%	20 5%	50 2 <b>%</b>	10
OCTOBER	94	1219	464	364	.78	1.8	1	86	65	5 <b>6</b>	49		
NOVEMBER	281	7819	2237	1980	.89	8.6	3	88	<b>6</b> 6	57	50		-
DECEMBER	261	9787	5646	2912	.52	21.7	7	91	69	60	53		-
JANUARY	300	10060	55 <b>26</b>	2941	.53	21.3	14	97	73	63	56		-
FEBRUARY	876	6577	4302	1818	.42	16. <b>6</b>	30	108	83	73	6 <b>6</b>		-
MARCH	1287	6819	3496	1795	.51	13.5	60	130	99	87	78		-
APRIL	<b>68</b> 6	4445	2226	1076	.48	8.6	90	156	119	105	94		-
MAY	568	1753	1000	361	. 36	3.8	120	194	152	135	124		-
JUNE	320	930	504	158	.31	1.9	183	349	269	234	209		-
JULY	127	<b>32</b> 3	244	59	.24	.9							
AUGUST	78	321	151	61	.40	.6							
		356	196	90	.46	-8							
SEPTEMBER	97	330	.,,	,,		•0							
SEPTEMBER ANNUAL MAGNI	576 TUDE AND	3711	2160 	802	.37	100	 MA				OF ANNUAL		.OW
MAGNIT	576 TUDE AND BASE	3711 PROBABILI D ON PERI	2160 TY OF IN OD OF RE	802 STANTANE CORD 196 CURRENCE	.37	100  FLOW , IN	MA PERIOD (CON-	BASI	ED ON PER HARGE, IN	RIOD OF F		968-82  TED RECUR D ANNUAL	RENC
MAGNIT	576 TUDE AND BASE	3711 PROBABILI D ON PERI	2160 TY OF IN OD OF RE	802 STANTANE CORD 196 CURRENCE	.37 COUS PEAK 18-82 INTERVAL IN PERCE	100  FLOW , IN	PERIOD	BASI	ED ON PER HARGE, IN	RIOD OF F	RECORD 19 DR INDICAT YEARS, AND	968-82  TED RECUR D ANNUAL	RENC
MAGNITON MAG	576  TUDE AND BASE , IN CFS, AND ANNUA	3711 PROBABILI D ON PERI FOR INDI	2160 TY OF IN OD OF RE CATED RE INCE PROE	802 STANTANE CORD 196 CURRENCE BABILITY,	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU-	BASI DISCI	HARGE, INTERN	RIOD OF E	RECORD 19 DR INDICAT YEARS, AND	968-82 TED RECUR D ANNUAL IN PERCEN	RRENC
MAGNITO SCHARGE YEARS,	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABILI D ON PERI FOR INDI AL EXCEEDA 5 20%	2160 TY OF IN OD OF RE CATED RE NNCE PROE	802 STANTANE CORD 196 CURRENCE BABILITY,	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FC VAL, IN N NCE PROBA	DR INDICAT YEARS, AND ABILITY, I	968-82 TED RECURD ANNUAL IN PERCEN	RRENC
MAGNITON MAG	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABIL! D ON PERI FOR INDI AL EXCEEDA 5 20%	2160 TY OF IN OD OF RE CATED RE NNCE PROE	802 ISTANTANE ISTANTANE ICORD 196 CURRENCE BABILITY, 25 4%	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, IN INTER EXCEEDAN 5 20%	N CFS, FO VAL, IN N NCE PROBA 10%	PRECORD 19 PRECORD 19	968-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENC
MAGNITON MAG	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABIL! D ON PERI FOR INDI AL EXCEEDA 5 20%	2160 TY OF IN OD OF RE CATED RE NNCE PROE	802 ISTANTANE ISTANTANE ICORD 196 CURRENCE BABILITY, 25 4%	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 23300 19300	HARGE, IN INTER EXCEEDAN 5 20%	10 OF F	PRECORD 19 OR INDICAT YEARS, AND ABILITY, 1 25 4% 49100 39000	P68-82 TED RECUF D ANNUAL IN PERCEN 50 2%	10 10
MAGNITONISCHARGE YEARS, 1.25 80%	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABIL! D ON PERI FOR INDI AL EXCEEDA 5 20%	2160 TY OF IN OD OF RE CATED RE NNCE PROE	802 ISTANTANE ISTANTANE ICORD 196 CURRENCE BABILITY, 25 4%	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI 2 50% 23300 19300 14700	HARGE, IN INTERNEXCEEDAN 5 20% 34000 27700 19800	N CFS, FC VAL, IN N NCE PROB/ 10 10% 40900 32900 22700	DR INDICAT YEARS, AND ABILITY, II 25 4% 49100 39000 26000	968-82 TED RECUF D ANNUAL IN PERCEN 50 2%	10 10
MAGNITUSCHARGE, YEARS, 1.25, 80%	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABIL! D ON PERI FOR INDI AL EXCEEDA 5 20%	2160 TY OF IN OD OF RE CATED RE NNCE PROE	802 ISTANTANE ISTANTANE ICORD 196 CURRENCE BABILITY, 25 4%	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7	DISCI DISCI 2 50% 23300 19300 14700 10300	HARGE, IN INTERNEXCEEDAN  5 20%  34000 27700 19800 13400	N CFS, FC VAL, IN N NCE PROB/ 10 10% 40900 32900 22700 15300	25 45 49100 39000 26000 17400	P68-82  TED RECUF D ANNUAL IN PERCEN  50 2%	TO 10
MAGNITISCHARGE YEARS, 1.25 80%	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABIL! D ON PERI FOR INDI AL EXCEEDA 5 20%	2160 TY OF IN OD OF RE CATED RE NNCE PROE	802 ISTANTANE ISTANTANE ICORD 196 CURRENCE BABILITY, 25 4%	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCI 2 50% 23300 19300 14700 10300 8160	AARGE, IN INTER EXCEEDAN 5 20% 34000 179800 113400 10100	N CFS, FG VAL, IN N NCE PROB/ 10 10% 40900 32900 22700 15300 10900	PRECORD 19 DR INDICAT YEARS, AND ABILITY, 1  25 4%  49100 39000 26000 17400 11700	P68-82  TED RECUF D ANNUAL IN PERCEN  50 2%	10 10
MAGNITONISCHARGE YEARS, 1.25 80%	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABIL! D ON PERI FOR INDI AL EXCEEDA 5 20%	2160 TY OF IN OD OF RE CATED RE NNCE PROE	802 ISTANTANE ISTANTANE ICORD 196 CURRENCE BABILITY, 25 4%	.37  OUS PEAK 18-82  INTERVAL IN PERCE	100 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7	DISCI DISCI 2 50% 23300 19300 14700 10300	HARGE, IN INTERNEXCEEDAN  5 20%  34000 27700 19800 13400	N CFS, FC VAL, IN N NCE PROB/ 10 10% 40900 32900 22700 15300	25 45 49100 39000 26000 17400	P68-82  TED RECUF D ANNUAL IN PERCEN  50 2%	10 10
MAGNITISCHARGE YEARS, 1.25 80%	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABIL! D ON PERI FOR INDI AL EXCEEDA 5 20%	2160  TY OF IN OD OF RE  CATED RE NICE PROE- 10 10%	802 ISTANTANE CORD 196 CURRENCE SABILITY, 25 4\$	.37 COUS PEAK 88-82 INTERVAL IN PERCE 50 2%	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	23300 19300 14700 10300 8160 6400 5620	HARGE, IN INTER: EXCEEDAN 5 20%	N CFS, FC WAL, IN N NCE PROB/ 10 10% 40900 32900 22700 15300 10900 9320 8250	PRECORD 19 PRECORD 19	P68-82  TED RECUF D ANNUAL IN PERCEN  50 2%	10 10
MAGNITUSCHARGE, YEARS, 1.25, 80%	576 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3711 PROBABILI D ON PERI FOR INDI AL EXCEEDA 5 20%	2160  TY OF IN OD OF RE  CATED RE INCE PROE  10 10%	802 ISTANTANE CORD 196 CURRENCE SABILITY, 25 4%	INTERVAL IN PERCE	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	250% 23300 19300 14700 10300 8160 6400 0F RECC	HARGE, IN INTER: EXCEEDAN 5 20% 34000 27700 19800 13400 10100 8380 7440 2000 10100 8000 1000 80000 8000 8000 8000 8000 8000 8000 8000 8000 8000 8000 8000 8000 80	ACFS, F(WAL, IN NCE PROB/ 10 10% 40900 32900 22700 15300 10900 9320 8250	PRECORD 19 PRECORD 19	P68-82  TED RECUF D ANNUAL IN PERCEN  50 2%	RRENC

SIUSLAW RIVER BASIN 164

## 14307645 NORTH FORK SIUSLAW RIVER NEAR MINERVA, OR

LOCATION.--Lat 44°02'50", long 124°00'10", in NW4SW4 sec.34, T.17 S., R.11 W., Lane County, Hydrologic Unit 17100206, on left bank 10 ft downstream from county road bridge, 0.3 mi upstream from Condon Creek, 2.7 mi southwest of Minerva, and at mile 13.09.

DRAINAGE AREA .-- 41.2 mi2.

PERIOD OF RECORD. -- October 1967 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 40 ft, from topographic map.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 290 ft3/s, 95.59 in/yr, 210,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,400 ft $^3$ /s Dec. 25, 1980, gage height, 24.36 ft; minimum, 11 ft $^3$ /s Sept. 9-11, 17, 18, 1980.

#### STATISTICAL SHMMADIES

					S	TATISTIC	AL SUMMARIES						
M	ONTHLY AN	ID ANNUAL	MEAN DI	SCHARGES	1968-82		МА		AND PROB		OF ANNUAL ECORD 19	. LOW FLO	IW
	M IN I MUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER	16 67	279 1078	101 383	79 285	.78 .74	2.9 11.0	1 3	15 15	12 13	11 12	10 11		
DECEMBER	56	1303	759	336	.44	21.7	7	16	13	12	12		
JANUARY	73	1082	659	315	.48	18.8	14	17	14	13	12		
FEBRUARY	171 150	875 809	564	224 199	.40	16.1 12.3	30	19 23	15 19	14 17	14 16		
MARCH APRIL	134	560	430 273	117	.46 .43	7.8	60 90	23 29	21	17	17		
MAY	84	256	133	51	.38	3.8	120	37	27	23	20		
JUNE	42	167	83	36	.43	2.4	183	62	48	41	36		
JULY	26	82	42	15	.36	1.2							
AUGUST	16	78	29	15	.53	.8							
SEPTEMBER	16	99	41	25	•60	1.2							
ANNUAL	118	443	290	88	.30	100							
					E INTERVAL , IN PERCE	•	PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10	 25 4%	50 2%	100 1%
2150	2700	3460	3970	4620									
WE I GHTE		•295					1 7	2350	2950	3360	3910 3180		
MEIGHIE	) SKEW =	• 290					3 7	2040 1700	2530 2020	2830 2170	2310		
							15	1280	1530	1670	1820		
							30	1040	1220	1310	1400		
							60 90	820 713	1020 907	1130 1010	1250 1110		
			DURATIO	ON TABLE	OF DAILY	MEAN FLOW	FOR PERIOD						
		DISCHA	RGE, IN	CFS, WH	ICH WAS EQ	UALED OR	EXCEEDED FO	R INDICA	TED PERC	ENT OF T	IME		
5%	10%	15%	20%	25%	30%	40% !	50% 60%	70%	75%	80%	85 <b>%</b>	90%	959
1170	772	576	453	358	284 1	89 12	26 83	53	44	35	27	22	17

## UMPOUA RIVER BASIN

## 14307700 JACKSON CREEK NEAR TILLER, OR

LOCATION.--Lat 42°57'15", long 122°49'40", in SW\u00e4NE\u00e4 sec.21 T.30 S., R.1 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.5 mi upstream from Chapman Creek, 0.8 mi downstream from Beaver Creek, 6.5 ml northeast of Tiller, and at mile 3.0. Records include flow of Chapman Creek.

DRAINAGE AREA.--152 mi<sup>2</sup>, at cableway 0.6 mi downstream where all discharge measurements are made.

PERIOD OF RECORD. -- October 1955 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,240.25 ft National Geodetic Vertical Datum of 1929 (levels by Douglas County Water Resources Survey).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--27 years, 313 ft3/s, 27.96 ln/yr, 226,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.0 ft, from floodmark, from rating curve extended above 5,100 ft<sup>3</sup>/s and basin runoff comparison; minimum, 11 ft<sup>3</sup>/s Jan. 6, 1977, Nov. 13, 1978, result of freezeup.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	ON-
МОМТН	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	19	242	55	48	.87	1.5	1	17	15	14	13	12	
NOVEMBER	23	1203	293	256	.87	7.8	3	17	15	14	13	12	
DECEMBER	19	2006	605	490	.81	16.1	7	18	15	14	13	13	
JANUARY	25	1410	648	403	.62	17.2	14	18	16	15	14 -	13	
FEBRUARY	26	1153	527	222	.42	14.0	30	19	17	16	15	15	
MARCH	122	1363	529	284	.54	14.1	60	22	19	18	17	16	
APRIL	158	705	449	153	.34	11.9	90	24	21	20	19	18	
MAY	120	752	389	159	.41	10.3	120	30	25	22	21	19	
JUNE	52	371	163	95	.58	4.3	183	68	47	38	32	25	
JULY	22	81	48	17	. 35	1.3							
AUGUST	17	70	27	10	.37	•7							
SEPTEMBER	16	89	27	14	.51	.7							
ANNUAL	85	566	313	109	.35	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-82

					ICE INTER		PERIOD (CON-		INTERV	AL, ÍN Y	EARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100
3410	5490	8990	11700	15600	18800								
							1	3850	6190	7670	9400	10600	
NE I GHTED	SKEW =	.118					3	2650	4310	5510	7100	8330	
							7	1750	2750	3490	4510	5330	
							15	1230	1810	2210	2740	3150	
							30	966	1350	1590	1890	2110	
							60	763	1070	1270	1520	1710	
							90	683	935	1080	1260	1370	_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-82

		DISCI	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCE	NT OF TIM	4E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1040	739	588	497	420	355	251	158		44		29		21	19

## UMPQUA RIVER BASIN

## 14308000 SOUTH UMPOUA RIVER AT TILLER, OR

LOCATION.--Lat 42°55'50", long 122°56'50", in NEt sec.33, T.30 S., R.2 W., Douglas County, Hydrologic Unit 17100302, Umpqua National Forest, on left bank 0.3 mi upstream from bridge on State Highway 227 at Tiller, 0.3 mi upstream from Elk Creek, and at mile 187.31.

DRAINAGE AREA .-- 449 mi 2.

PERIOD OF RECORD.--October 1910 to December 1911, October 1939 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Prior to December 1911, published as "South Fork of Umpqua River at Tiller".

GAGE.--Water-stage recorder. Datum of gage is 991.8 ft National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 1, 1939, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 1,034 ft<sup>3</sup>/s, 31.27 ln/yr, 749,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 25.72 ft; minimum observed, 20 ft<sup>3</sup>/s Sept. 3, 4, 1911.

						STATIST	ICAL S	UMMARIES	;					
М	A YJHTMC	ND ANNUAL	MEAN DI	SCHARGES	1911-	82		МА		AND PROE			AL LOW FL 1941-82	OW
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF	OF OF		PERIOD (CON- SECU-	DISC	INTERVAL	_, IN YE	ARS, AND	ATED RECU ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATIO			TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL	44 48 67 90 95 442 433 309 121 50 30 40	1791 3977 7480 4513 3757 4776 2314 2093 1643 301 206 228 1762	210 1061 2015 2153 1977 1727 1391 1081 512 154 77 73	292 860 1586 1342 824 909 477 475 293 31 343	1.33 .8 .77 .66 .44 .55 .33 .44 .57 .33	1 8. 9 16. 2 17. 2 15. 3 13. 4 11. 4 8. 7 4. 9 1. 7 .	5 2 3 9 9 2 7 1	1 3 7 14 30 60 90 120 183	44 45 46 48 53 61 71 91 220	37 37 38 40 44 50 58 74 151	34 34 35 37 40 45 53 67 123	34 37 41 49 62 105	28 28 29 31 34 38 45 57 87	26 26 27 29 32 35 43 54 76
OISCHARGE, YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	CATED RE	CORD 19 COURRENCE BABILITY	11-82 E INTER	VAL, IN RCENT	 	PERIOD	BASE	ARGE, IN	RIOD OF F	RECORD 1		 RR <b>E</b> NCE
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4% 	50 2 <b>%</b> 	100 1% 		SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
11300  WEIGHTED	17800 ) SKEW =	.034	36000 4	16700 	55300 	64400	<b></b>	1 3 7 15 30 60 90	13500 9390 6320 4320 3320 2640 2340	21100 14700 9480 6170 4600 3660 3200	25700 18000 11500 7340 5400 4300 3720	30900 22100 13900 8760 6360 5050 4330	34300 24900 15600 9770 7040 5590 4740	37300 27500 17200 10700 7690 6100 5140
			DURATIO	N TABLE	OF DAIL	LY MEAN F	LOW FO	R PERIOD	OF RECO	ORD 1911-	82			
		DISCHA	RGE, IN	CFS, WH	ICH WAS	EQUALED	OR EXC	EDED FO	R INDICA	TED PERC	ENT OF T	IME	·	
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70 <b>%</b>	75%	80%	85%	90%	955
3630	2470	1940 1	580 1	320	1100	779	511	283	138	105	84	70	58	48

167

## 14308500 ELK CREEK NEAR DREW, OR

LOCATION.--Lat 42°53'25", long 122°55'00", in SWt sec.11, T.31 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 100 ft downstream from Dixon Creek, 0.1 mi upstream from Drew Creek, 1.3 mi northwest of Drew, 3.3 mi southeast of Tiller, and at mile 4.1

DRAINAGE AREA .-- 54.4 mi2.

PERIOD OF RECORD. -- September 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage Is 1,279.25 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years (water years 1955-82), 84.3 ft<sup>3</sup>/s, 61,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 10.61 ft, from rating curve extended above 2,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 10.34 ft; maximum gage height, 10.80 ft Jan. 15, 1974; no flow at times in September 1974, Aug. 16-22, 1977, and Aug. 17-24, Sept. 16-19, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 11.8 ft, from floodmarks, probably for flood in January or November 1953, discharge, about 11,000 ft<sup>3</sup>/s.

## STATISTICAL SUMMARIES

MONTHLY	AND	ANNUAL	MEAN	DISCHARGE	S	1955-82			MAGNI	TUDE	AND	PΕ	ROBABI	LITY	OF	ANNU	JAL	LOW	FLOV	ı
										BASE	D 01	N F	PERIOD	OF	RECO	ORD	195	6-82	•	

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1.5	63	8.7	13	1.47	.9	1	.6	.2	 . 1	0.0	0.0	
NOVEMBER	3.3	449	74	91	1.22	7.3	3	.6	.2	. 1	0.0	0.0	
DECEMBER	3.1	651	188	169	.90	18.5	7	.7	.2	. 1	.1	0.0	
JANUARY	4.9	644	224	162	.72	22.1	14	•7	.2	.1	. 1	0.0	
FEBRUARY	5.1	382	173	89	.52	17.0	30	.8	.3	.2	.1	0.0	
MARCH	42	356	164	93	•56	16.2	60	1.2	.6	.4	.3	.2	
APRIL	27	193	107	51	.48	10.5	90	1.5	1.0	•8	.7	•5	
MAY	11	164	53	37	•69	5.3	120	2.4	1.6	1.3	1.1	1.0	
JUNE	3.8	51	15	11	.72	1.5	183	7.3	4.7	3.7	3.1	2.5	
JULY	.7	11	4.1	2.6	.65	. 4							
AUGUST	. 1	10	1.7	1.9	1.09	.2							
SEPTEMBER	.1	19	2.2	3.3	1.53	.2							
ANNUAL	16	180	84	36	.43	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1955-82

# MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1955-82

DISCHARGE, YEARS, A					ICE INTER		PERIOD (CON-		INTERV	'AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
1660	2900	4990	6610	8870	10700								
							1	1730	2880	3550	4280	4730	
WE I GHTED	SKEW =	081					3	1120	1860	2320	2870	3240	
							7	721	1160	1440	1780	2010	
							15	462	706	857	1030	1160	
							30	334	491	588	702	781	
							60	263	376	437	501	540	
							90	222	315	366	420	455	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1955-82

 		DISCH	ARGE, II	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	· <b></b>		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
346	210	159	121	92	72	40	21	9.7	4.5	3.2	2.4	1.7	1.2	.7

## 14308700 DAYS CREEK AT DAYS CREEK, OR

LOCATION.--Lat 42°58'55", long 123°08'55", in NE‡ sec.10, T.30 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank 150 ft downstream from Wood Creek, 1.0 mi northeast of town of Days Creek, and at mile 1.3.

DRAINAGE AREA. -- 55.3 mi2.

PERIOD OF RECORD. -- October 1955 to July 1972.

GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 810 ft, from topographic mep. Prior to Oct. 1, 1962, at site 170 ft upstream at detum 3.06 ft higher.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years (water years 1956-71), 44.4 ft3/s, 32,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Meximum discharge, 3,450 ft<sup>3</sup>/s Feb. 21, 1956, gage height, 11.24 ft, site and detum then in use, from rating curve extended above 1,100 ft<sup>3</sup>/s on besis of slope-erea measurement of peak flow; no flow for many deys in July and August 1961

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-71 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-71

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	1.5	32	7.2	8.3	1.15	1.4	1	.3	.2	.1	.1		
NOVEMBER	3.7	120	39	34	.88	7.2	3	.4	.2	- 1	.1		
DECEMBER	11	424	115	107	.93	21.5	7	.5	•2	. 1	• 1.		
JANUARY	13	232	120	78	•65	22.5	14	.5	•2	. 1	.1		
FEBRUARY	42	213	99	48	. 49	18.5	30	•6	.3	•2	- 1		
MARCH	20	166	82	49	. 59	15.3	60	.8	.5	.4	.3		
APRIL	11	112	35	25	.70	6.6	90	1.1	.7	.6	.6		
MAY	4.2	117	25	27	1.08	4.7	120	1.5	1.1	.9	.8		
JUNE	2.0	26	7.8	6.2	• 79	1.5	183	3.8	2.5	2.1	1.9		
JULY	.5	4.4	2.0	1.4	.68	.4							
AUGUST	- 1	2.2	1.0	.7	.65	.2							
SEPTEMBER	•7	3.0	1.5	•6	.44	.3							
ANNUAL	19	92	44	16	.37	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-71

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-71

				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
1040	1580	2380	2930	3630		-							
							1	934	1360	1650	2020		
WEIGHTED	SKEW =	143					3	657	922	1090	1290		
							7	406	593	732	926		
							15	264	378	455	555		
							30	197	272	320	381		
							60	142	194	233	287		
							90	118	164	198	244		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-71

5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75% 80% 85% 90% 95% 181 114 79 55 43 34 20 11 6.0 3.1 2.3 1.8 1.3 .8 .5			DISC	HARGE, I	IN CFS, N	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	IT OF TIM	1E		_
181 114 79 55 43 34 20 11 6.0 3.1 2.3 1.8 1.3 .8 .5	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	181	114	79	55	43	34	20	11	6.0	3.1	2.3	1.8	1.3	.8	•5

## UMPQUA RIVER BASIN

#### 14309000 COW CREEK NEAR AZALEA, OR

LOCATION.--Lat 42°49'30", long 123°10'40", in N-1/2 sec.4, T.32 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.8 mi upstream from Whitehorse Creek, 4.5 mi northeast of Azalea, and at mile 58.2.

DRAINAGE AREA. -- 78.0 mi<sup>2</sup>.

404

264

198

156

123

100

PERIOD OF RECORD.--April 1926 to September 1928 (no winter records), April 1929 to December 1931, April 1932 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,694.32 ft National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Prior to July 19, 1949, nonrecording gage at same site and datum.

REMARKS.--No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--52 years (water years 1930-31, 1933-82), 110 ft<sup>3</sup>/s, 19.15 in/yr, 79,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 16.40 ft, from high-water mark in well; minimum, 1.1 ft<sup>3</sup>/s Aug. 12, 1981, but may have been less during period of no gage-height record Sept. 4-30, 1970.

#### STATISTICAL SUMMARIES

					;	STATISTIC	AL SUMMARIES						
М	ONTHLY A	ND ANNUAL	MEAN DI	SCHARGES	1930-82		МА	GNITUDE A BASE	AND PROBA				WC
	MINIMONA	MAY I MI BI	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-		NTERVAL,	IN YEAR E PROBAE	RS, AND	TED RECUI ANNUAL NO IN PERCEI	0 <b>N-</b>
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNI	23 TUDE AND	294 542 765 926 598 521 328 268 129 36 23 30 269 PROBABILI			.33 .32 .45 	1.9 6.3 15.1 20.0 18.2 15.5 11.1 6.0 2.9 1.3 .9	1 3 7 14 30 60 90 120 183	8.4 8.6 8.8 9.2 9.7 11 11 13 21 GNITUDE / BASE	6.0 6.2 6.6 6.9 7.4 8.5 9.4 11 16			3.0 3.6 4.0 4.5 5.8 7.2 8.2 11	2.4 2.5 3.3 5.6 6.1 7.10
		FOR INDI					PERIOD (CON-		INTERV	L, IN YE	ARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1390	2670	4670	6050	7760	9000 10	200							
WEIGHTE	SKEW =	544					1 3 7 15 30 60 90	1830 1220 818 548 393 318 271	3110 2050 1330 855 604 467 394	3880 2550 1630 1040 735 547 462	4730 3100 1970 1250 886 630 532	5270 3450 2190 1380 989 681 575	5750 3750 2380 1500 1080 724 612
			DURATIO	N TABLE	OF DAILY	MEAN FLO	FOR PERIOD	OF RECOF	RD 1930-8	2			
		DISCHA	RGE, IN	CFS, WHI	CH WAS EQ	UALED OR	EXCEEDED FOR	R INDICAT	ED PERCE	NT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50% 60%	70%	75%	80%	85%	90%	95%

26

18

## 14309500 WEST FORK COW CREEK NEAR GLENDALE. OR

LOCATION.--Lat 42°48'15", long 123°36'35", in SW±NE± sec.11, T.32 S., R.8 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.6 mi downstream from Bear Creek, 11 mi northwest of Glendale, and at mile 0.8.

DRAINAGE AREA. -- 86.9 mi2.

1230

722

505

373

276

212 127

17 14

12

9.7

PERIOD OF RECORD.--August 1955 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,018.48 ft National Geodetic Vertical Datum of 1929. Prior to June 8, 1964, at site 0.6 mi upstream at different datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--27 years (water years 1956-82), 273 ft<sup>3</sup>/s, 42.66 in/yr, 197,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.59 ft, from floodmark, from rating curve extended above 2,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; mlnimum, 3.7 ft<sup>3</sup>/s Aug. 17, 19, 1977.

## STATISTICAL SUMMARIES

	ONTHE! AN	ID ANNUAL I	MEAN DIS	SCHARGES	1956-82		MAC	GNITUDE A BASED	ON PERI				
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	!	NTERVAL,	IN YEA	RS, AND	TED RECUF ANNUAL NO IN PERCEN	N-
нтиом	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	8.5	254	48	55	1.14	1.5	1	7.3	6.1	5.5			
10VEMBER	15	1470	298	294	•99	9.1	3	7.5	6.3	5.7			
DECEMBER	13	1669	648	460	.71	19.7	7	7.6	6.5	5.8			
JANUARY	24	1496	724	457	.63	22.0	14	8.0	6.7	6.0	5.5	4.9	
FEBRUARY	66	1660	576	316	.55	17.5	30	8.4	7.2	6.7	6.3	- 5.8	
MARCH	116	920	502	240	. 48	15.3	60	9.5	8.2	7.6	7.2	6.9	
APR I L	79	840	290	180	.62	8.8	90	11	9.6	9.1	8.7	8.5	
MAY	44	476	120	94	.78	3.7	120	14	12	11	10	9.6	
JUNE	23	79	38	11	. 29	1.2	183	30	21	18	16	14	
JULY	11	25	18	3.6	.20	.5							
AUGUST	7.3	16	11	2.3	.21	.3							
SEPTEMBER	6.9	54	14	9.7	.71	.4							
ANNUAL  MAGNI		499 PROBABILI D ON PERIO				100  FLOW	MAG		ND PROBA			 L HIGH FL 956-82	 OW
MAGNI	TUDE AND BASE	PROBABILI	TY OF IN	ISTANTANE(CORD 1956	DUS PEAK F 5-82	FLOW	PERIOD	BASED DISCHA	ON PERI	OD OF RI	ECORD 1  R INDICA EARS, AN		RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILITO ON PERIO	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1956 CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL, IN PERCEI	FLOW IN	PERIOD (CON- SECU-	BASED DISCHA E	ON PERI	OD OF RI	ECORD 1 R INDICA EARS, AN BILITY,	956-82 TED RECUR D ANNUAL IN PERCEN	RENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF IND OF RECATED RENCE PROB	STANTANEC CORD 1956 CURRENCE BABILITY,	OUS PEAK F 5-82 INTERVAL IN PERCEI	FLOW , IN	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RI	ECORD 1  R INDICA EARS, AN	956-82  TED RECUR D ANNUAL	RENCE T
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILII D ON PERIO FOR INDIO L EXCEEDAN 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL, IN PERCEI	FLOW IN	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI	OD OF RI	ECORD 1 R INDICA EARS, AN BILITY, 25 4%	956-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RENCE T
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILIT D ON PERIO FOR INDIC EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL IN PERCEI	FLOW IN	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF RICES, FOIL, IN YIE PROBAL	ECORD 1 R INDICA EARS, AN BILITY, 25 4% 9160	956-82 TED RECUF D ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIC EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL IN PERCEI	FLOW IN	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  4580 3260	ON PERI RGE, IN INTERVA XCEEDANC 5 20%	OD OF RI CFS, FOI L, IN YI E PROBAL 10 10%	ECORD 1 R INDICA EARS, AN BILITY, 25 4% 9160 6830	956-82 TED RECUF D ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILIT D ON PERIO FOR INDIC EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL IN PERCEI	FLOW IN	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  4580 3260 2220	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 6630 4770 3230	OD OF RI CFS, FOI L, IN YI E PROBAR 10 10% 7830 5710 3880	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  9160 6830 4700	956-82 TED RECURD ANNUAL IN PERCEN 2% 10000 7620 5300	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILIT D ON PERIO FOR INDIC EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL IN PERCEI	FLOW IN	PERIOD (CON- SECU- TIVE DAYS) 	BASED  DISCHA  E 2 50%  4580 3260 2220 1500	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 6630 4770 3230 2070	OD OF RICCES, FOIL, IN YIE PROBAIL  10 10 7830 5710 3880 2420	P160 6830 4700 2820	956-82 TED RECURD ANNUAL IN PERCEN 50 2% 10000 7620 5300 3090	T 100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL IN PERCEI	FLOW IN	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED  DISCHA  E  2  50%  4580 3260 2220 1500 1110	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 6630 4770 3230 22070 1510	OD OF RICCES, FOILL, IN YIE PROBAL  10 10 7830 5710 3880 2420 1740	P160 6830 4700 2820 2000	756-82 TED RECUFD ANNUAL IN PERCEN 50 2\$ 10000 7620 5300 3090 2170	T 100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	CURRENCE BABILITY,	DUS PEAK F 5-82 INTERVAL IN PERCEI	FLOW IN	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E  2  50%  4580  3260  2220  1110  887	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 6630 4770 3230 2070 1510 1190	OD OF RICCES, FOIL, IN YIE PROBAIL  7830 5710 3880 2420 1740 1340	PIGORD 1  R INDICA EARS, AN BILITY,  25 4%  9160 6830 4700 2820 2000 1480	956-82  TED RECUP D ANNUAL IN PERCEN  50 2%  10000 7620 5300 3090 2170 1570	T 100 1%
MAGNI	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IND OF RE	STANTANEC CORD 1956 CURRENCE BABILITY, 25 4%	DUS PEAK F 5-82 INTERVAL IN PERCEI 50 2%	FLOW  , IN  NT  1000  1.8	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50\$  4580 3260 2220 1110 887 750	RGE, IN INTERVA XCEEDANC 5 20%	OD OF RICCES, FOIL, IN YIE PROBAIL  7830 5710 3880 2420 1740 1340 11110	P160 6830 4700 2820 2000	756-82 TED RECUFD ANNUAL IN PERCEN 50 2\$ 10000 7620 5300 3090 2170	T 100 1%
MAGNI	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IND OF RE	STANTANEC CORD 1956 CURRENCE BABILITY, 25 4%	DUS PEAK F 5-82 INTERVAL IN PERCEI 50 2%	FLOW  , IN  NT  1000  1.8	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50\$  4580 3260 2220 1110 887 750	RGE, IN INTERVA XCEEDANC 5 20%	OD OF RICCES, FOIL, IN YIE PROBAIL  7830 5710 3880 2420 1740 1340 11110	PIGORD 1  R INDICA EARS, AN BILITY,  25 4%  9160 6830 4700 2820 2000 1480	956-82  TED RECUP D ANNUAL IN PERCEN  50 2%  10000 7620 5300 3090 2170 1570	T 100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILITO ON PERIOD ON PERIOD ON PERIOD ON PERIOD OF P	TY OF IND OF RECATED RECEPROE	STANTANEC CORD 1956 CURRENCE SABILITY, 25 4% 4000 15	DUS PEAK F 5-82 INTERVAL IN PERCEI 50 2%	FLOW  IN NT  100  1%  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  4580 3260 2220 1500 1110 887 750  OF RECOR	RGE, IN INTERVA XCEEDANC 5 20% 6630 4770 3230 2070 1510 1190 992 D 1956-8	OD OF RICCES, FOIL, IN YIE PROBAIL  10 10 7830 5710 3880 2420 1740 11340 11110	9160 6830 4700 2820 2000 1480 1210	956-82  TED RECUP D ANNUAL IN PERCEN  50 2%  10000 7620 5300 3090 2170 1570	T 100 1%

## UMPQUA RIVER BASIN

171

## 14310000 COW CREEK NEAR RIDDLE, OR

LOCATION.--Lat 42°55'25", long 123°25'40", in NE<sup>±</sup> sec.32, T.30 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.4 mi upstream from Council Creek, 3.8 ml southwest of Riddle, and at mile 6.7.

DRAINAGE AREA. -- 456 mi<sup>2</sup>.

3880

2260

1160

708

PERIOD OF RECORD. -- September 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 682.60 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years (water years 1955-82),  $888 \text{ ft}^3/\text{s}$ , 634,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 28.17 ft; minimum, 7.4 ft<sup>3</sup>/s Aug. 17-19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reached a stage of about 28.5 ft, discharge, 41,100 ft<sup>3</sup>/s, from slope-area measurement.

STATISTICAL SUMMARIES

	ONTHLY AN												
				STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECUI ANNUAL NO IN PERCEI	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JUNE AUGUST SEPTEMBER	41 59 58 85 161 506 199 172 75 25 15	633 4712 6574 5889 5902 3398 2719 1943 264 128 70 156	126 797 1971 2466 1915 1689 1000 435 150 65 36	125 923 1608 1743 1119 912 610 337 50 22 12 25	.99 1.16 .82 .71 .58 .54 .61 .77 .33 .33 .33 .56	1.2 7.5 18.4 23.1 17.9 15.8 9.4 4.1 1.4 .6 .3	1 3 7 14 30 60 90 120 183	25 26 27 28 29 34 39 50 99	19 19 20 21 22 26 32 42 75	15 16 16 17 19 22 28 38 66	13 13 13 14 16 19 26 36 60	9.8 9.9 10 11 13 16 23 33 54	
ANNUAL	147	1809	888	384	.43	100							
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF IN OD OF RE CATED RE	STANTANE CORD 195 CURRENCE	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON-	BAS	ED ON PEI  HARGE, II INTER	N CFS, FO	RECORD 1	AL HIGH FL 1955-82 ATED RECURND ANNUAL IN PERCEN	RENCE
MAGNI DI SCHARGE	TUDE AND BASE	PROBABILI D ON PERI	TY OF INOD OF RE	STANTANE CORD 195	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW	PERIOD	BAS	ED ON PEI  HARGE, II INTER	N CFS, FO	RECORD 1	1955-82 ATED RECURND ANNUAL	RENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDII L EXCEEDA 5 20%	TY OF INDO OF RE	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 5-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT  100 1%	PERIOD (CON- SECU- TIVE	DISCI 2 50% 15900 10800 7250 4850 3610 2880 2420	HARGE, II INTERI EXCEEDAI 5 20% 23900 16900 11600 7370 5370 4130 3440	N CFS, FIVAL, IN NCE PROB.  10 10%  27700 20400 14300 6360 4750 3940	RECORD 1	1955-82 ATED RECUF ND ANNUAL IN PERCEN	RENCE T
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDAD 5 20% 29000 39	TY OF IN OD OF RECATED RENCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4% 2300 4	OUS PEAK 5-82  INTERVAL IN PERCE 50 2%  7500	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	DISCI 2 50% 15900 7250 4850 3610 2880 2420	HARGE, II INTER: EXCEEDAN 5 20% 23900 11600 7370 5370 4130 3440	N CFS, FIVAL, IN VACE PROB.  27700 20400 14300 8860 6360 4750 3940	DR INDICA (FARS, AN ABILITY, 25 4% 31000 24200 17500 10500 7420 5330 4410	1955-82  ATED RECURND ANNUAL IN PERCEN 50 2%  32800 26500 19600 11600 8090 5660	T 100 1%

241

134

418

77

61

27

34

## 14310700 SOUTH MYRTLE CREEK NEAR MYRTLE CREEK. OR

LOCATION.--Lat 43°01'55", long 123°11'30", in SEL sec.20, T.29 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.6 mi downstream from School Hollow, 5.5 ml east of town of Myrtle Creek, and at mile 7.3.

DRAINAGE AREA .-- 43.9 mi2.

258

PERIOD OF RECORD. -- October 1955 to July 1972.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage Is 775.25 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years (water years 1956-71), 65.9 ft3/s, 57,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,050  $ft^3/s$  Dec. 11, 1956, gage height, 7.72 ft, from rating curve extended above 1,100  $ft^3/s$ ; mlnimum observed, 0.20  $ft^3/s$  Aug. 2, 1961.

#### STATISTICAL SUMMARIES

					3	TATISTICA	L SUMMARIES						
М	ONTHLY AN	ID ANNUAL	MEAN DISC	CHARGES	1956-71		MA				OF ANNUAL ECORD 19		OW
	MINIMI	MAYIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER	6.2 8.3 18	44 146 434	15 59 145	11 40 122	.74 .67	1.8 7.5 18.3	1 3 7	.8 1.1 1.5	.6	.4			
JANUARY FEBRUARY MARCH	22 64 39	345 230 274	170 135 127	114 54 75	.67 .40	21.4 17.0 16.0	14 30 60	1.8 2.1 2.8	1.1	.9 1.2 1.7	.8 1.0		
APRIL MAY JUNE	25 13 5.6	149 159	65 47	31 35	.47 .74	8.2 5.9	90 120	3.6 4.9	2.8 3.8	2.5 3.3	2.3 3.0		
JULY AUGUST SEPTEMBER	1.2 1.3	33 13 5.6 8.1	17 5.7 3.2 5.0	8.2 3.3 1.4 1.5	• 57 • 44	2.1 .7 .4 .6	183	9.6	7.1	6.2	5.6		
ANNUAL	28	120	66	22	.33	100							
MAGNI	TUDE AND												
		PROBABILI D ON PERIO	TY OF INS OD OF REC			FLOW	MA(				OF ANNUAL ECORD 19		LOW
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF REC	CURRENCE	INTERVAL	, IN NT	PERIOD (CON-	BASE	D ON PER  ARGE, IN  INTERVA	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I	56-71 ED RECUR ANNUAL N PERCEN	RRENCE
DISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF REC	CORD 1956 CURRENCE	INTERVAL	 , IN	PERIOD	BASE	D ON PER  ARGE, IN  INTERVA	CFS, FOR	ECORD 19 R INDICAT EARS, AND	56-71 ED RECUR ANNUAL N PERCEN	RRENCE
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAD	OD OF REC	CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	D1SCH	O ON PER ARGE, IN INTERV EXCEEDANG	CFS, FOR AL, IN YICE PROBAL	ECORD 19 R INDICAT EARS, AND BILITY, I	ED RECUR ANNUAL N PERCEN	RRENCE NT
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAD	OD OF REC	CORD 1956 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERVI EXCEEDANC	CFS, FOI AL, IN YI CE PROBAL 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE NT 100 1%
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAD	OD OF RECONCE PROBA	CURRENCE BILITY, 25 44	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	DISCH.  2 50\$  1100 808 521 357 266 196 168	ARGE, IN INTERV/EXCEEDANC  1520 1070 722 480 358 267 227	CFS, FOI AL, IN YI E PROBAI 10 10\$ 1790 1210 854 414 316 265	R INDICAT EARS, AND BILITY, I 25 4% 2130 1370 1020 629 478 380	ED RECUF ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	OD OF RECONCE PROBA	CURRENCE BILITY, 25 4% 4400	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	DISCH.  2 50\$  1100 808 521 357 266 196 168  OF RECOR	D ON PER  ARGE, IN INTERV EXCEEDANC  5 20\$  1520 1070 722 480 358 267 227  RD 1956-7	1790 1210 854 414 316 265	25 4% 2130 1020 629 478 380 313	ED RECUF ANNUAL N PERCEN 50 2%	100 1%

165 117 89 72 59 40 26 16 8.6 6.8 5.4 4.2 3.1 2.0

## UMPQUA RIVER BASIN 173

# 14311000 NORTH MYRTLE CREEK NEAR MYRTLE CREEK, OR

LOCATION.--Lat 43°02'30", long 123°15'30", in SW½ sec.14, T.29 S., R.5 W., Douglas County, Hydrologic Unit 17100302, on left bank 300 ft downstream from Bilger Creek, 1.5 mi northeast of town of Myrtle Creek, and at mile 2.2.

DRAINAGE AREA .-- 54.2 mi2.

308

189

135

103

79

62

38

24

14

8.3

6.6

5.1

4.0

3.1

2.2

PERIOD OF RECORD. -- October 1955 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 642.81 ft National Geodetic Vertical Datum of 1929 (levels by City Engineer of Myrtle Creek). Oct. 1, 1955, to Aug. 31, 1977, at site 340 ft downstream on right bank. Oct. 1, 1955, to Sept. 30, 1975, at datum 1.63 ft lower and Oct. 1, 1975, to Aug. 31, 1977, at datum 1.33 ft lower.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 72.8 ft3/s, 52,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft<sup>3</sup>/s Dec. 6, 1981, gage height, 10.08 ft, from floodmark, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum gage height, 11.58 ft Dec. 26, 1955 (backwater from debris), site and datum then in use; no flow at times in July 1973 and August 1977.

#### STATISTICAL SHMMARIES

М	ONTHLY AN	ND ANNUAL	MEAN DIS	CHARGES	1956-82		MAC	BASEC	ON PERI			957-82	
	MINIMUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	RS, AND	TED RECUR ANNUAL NO IN PERCEN	N-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	4.6	38	12	7.4	.64	1.3	1						
NDVEMBER	9.1	376	68	73	1.07	7.8	3						
DECEMBER	9.5	482	169	130	.77	19.3	7						
JANUARY	11	384	195	119	-61	22.3	14	2.4	1.2	•6	.3	.1	
FEBRUARY	9.1	363	152	81	.53	17.4	30	2.5	1.6	1.2	.9	.7	
MARCH	38	294	135	84	.62	15.4	60	3.2	2.1	1.7	1.4	1.1	
APRIL	18	207	77	47	.60	8.8	90	3.8	2.8	2.3	2.0	1.7	
MAY	12	188	40	34	.86	4.5	120	5.0	3.9	3.4	3.0	2.6	
JUNE	5.2	34	15	6.3	.44	1.7	183	9.2	7.1	6.3	5.7	5.2	
JULY	1.6	11	5.5	2.3	.43	•6							
AUGUST	1.1	9.9	3.4	1.8	.53	.4							
SEPTEMBER	2.6	11	4.7	1.8	•38	.5							
		133 PROBABILI D ON PERIO				100  FLOW	 MAG		ND PROBA			 HIGH FL 956-82	 OW
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO	TY OF INS	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASED  DISCHA	ON PERI  RGE, IN INTERVA	OD OF RE  CFS, FOR L, IN YE	CORD 19	956-82  TED RECUR	RENCE
MAGN1	TUDE AND BASE	PROBABILI D ON PERIO	TY OF INS	STANTANEC CORD 1956 CURRENCE	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE	BASED  DISCHA  E  2	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 19 INDICAT ARS, AND	956-82 FED RECUR O ANNUAL IN PERCEN	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU-	BASED DISCHA	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 19 INDICAT	956-82 FED RECUR O ANNUAL IN PERCEN	RENCE
DISCHARGE YEARS, 1	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 19 INDICAT ARS, AND ILLITY, I	P56-82  TED RECUR  O ANNUAL  N PERCEN  50 2%	RENCE T
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED	ON PERI	OD OF RECEIVED	CORD 19 INDICAT RARS, AND ILLITY, I 25 4% 2210	P56-82  TED RECURD ANNUAL N PERCEN  50 2%	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  1350 937	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10% 2080 1430	2210	250 1550 2250 1550	RENCE T
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED  DISCHA  E  2  50%  1350  937  630	ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10 5 2080 1430 948	25 4% 2210 1520 1000	2250 1020	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASED DISCHA E 2 50% 1350 937 630 418	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 1890 1300 866 576	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%  2080 1430 948 639	2210 1520 1000 688	2250 1020 711	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%  1350  937  630  418  315	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 1890 1300 866 576 423	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10% 2080 1430 948 639 463	25 4 2210 1520 1000 688 493	250 1550 1020 711 505	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASED DISCHA E 2 50% 1350 937 630 418	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 1890 1300 866 576	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%  2080 1430 948 639	2210 1520 1000 688	2250 1020 711	RENCE T
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI'D ON PERIO	TY OF INSTANCE OF THE PROBLEM OF THE	STANTANEC CORD 1950 CURRENCE ABILITY, 25 4%	DUS PEAK 5-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1350 937 630 418 315 248 208	ON PERI RGE, IN INTERVA XCCEDANC  5 20%  1890 1300 866 576 423 324 278	OD OF RECOMPANY OF	2210 1520 1000 688 493 366	250 1020 711 505 373	RENCE
MAGNITOLISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI' D ON PERIO FOR INDII L EXCEEDA  5 20%  2780 574	TY OF INS OD OF REC CATED REC NCE PROBJ 10 10% 3410 4	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4% 1150 4	DUS PEAK 5-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  1350 937 630 418 315 248 208  OF RECORI	ON PERI RGE, IN INTERVA XCEEDANC  5 20%  1890 1300 866 576 423 324 278  D 1956-8:	OD OF RECOMPANY OF	2210 1520 1000 688 493 366 326	250 1020 711 505 373	RENCE

#### UMPOUA RIVER BASIN

## 14311200 OLALLA CREEK NEAR TENMILE, OR

LOCATION.--Lat 43°02'20", long 123°32'35", in NW\ sec.21, T.29 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.5 mi downstream from Berry Creek, 4.4 mi south of Tenmile, and at mile 11.7.

DRAINAGE AREA .-- 61.3 mi2.

PERIOD OF RECORD.--October 1956 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 749.53 ft National Geodetic Vertical Datum of 1929. Prior to June 21, 1957, nonrecording gage at site 0.3 mi downstream at datum 7.83 ft lower.

 $\label{eq:REMARKS.--No regulation.} Remarks.-- No regulation. Some diversions for irrigation above station.$ 

AVERAGE DISCHARGE.--17 years, 102 ft<sup>3</sup>/s, 73,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,160 ft<sup>3</sup>/s Jan. 3, 1966, gage height, 11.98 ft, from floodmark; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1920, 13.6 ft Dec. 26, 1955, from floodmarks, present site and datum, discharge, 12,300 ft<sup>3</sup>/s, from rating curve extended above 6,000 ft<sup>3</sup>/s.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-73 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-73

			Meth	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	1	NTERVAL,	IN YEAR	INDICATE S, AND AN ULITY, IN	NNUAL NO	ON-
<b>МОМТН</b>	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
CTOBER	.9	51	8.9	15	1.64	.7	1						
OVEMBER	3.4	253	80	71	.89	6.5	3						
ECEMBER	11	660	239	175	.73	19.4	7						
ANUARY	25	613	328	214	.65	26.7	14						
EBRUARY	56	754	242	177	.73	19.7	30	.2	. 1	0.0	0.0		
IARCH	45	463	205	126	.61	16.7	60	.4	.2	. 1	.1		
PRIL	20	283	79	69	.87	6.4	90	.7	.4	.3	.2		
ΙΑΥ	6.9	246	37	57	1.56	3.0	120	1.2	.8	.6	.5		
UNE	2.8	28	8.6	6.5	.76	.7	183	4.5	2.6	2.0	1.6		
ULY	.4	5.8	2.0	1.6	.82	.2							
UGUST	0.0	1.5	.5	.4	. 79	0.0							
EPTEMBER	.1	1.8	.8	.5	.64	. 1							
NNUAL	42	167	102	31	.30	100							
MAGNI	TUDE AND BASE , IN CFS,	PROBABILITO ON PERIO	TY OF INS	TANTANEC CORD 195 CURRENCE BILITY,	DUS PEAK F 7-73 INTERVAL, IN PERCE	 FLOW  , IN NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RE  CFS, FOR L, IN YE	F ANNUAL CORD 195 INDICATE ARS, AND ILITY, IN	57-73 ED RECUF ANNUAL	RRENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILITO ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	TANTANECORD 1957	OUS PEAK F 7-73 INTERVAL, IN PERCEN	FLOW  , IN NT	PERIOD (CON- SECU-	BASEC DISCHA	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 195  INDICATE ARS, AND ILITY, IN	57-73 ED RECUF ANNUAL I PERCEN	RRENCE
MAGNI ISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILITO ON PERIO	TY OF INS	TANTANEC CORD 195 CURRENCE BILITY,	DUS PEAK F 7-73 INTERVAL, IN PERCE	 FLOW  , IN NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RE  CFS, FOR L, IN YE	CORD 195  INDICATE ARS, AND	57-73 ED RECUF ANNUAL	RRENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI' D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	TANTANECORD 1957	OUS PEAK F 7-73 INTERVAL, IN PERCEN	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	O ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%	CORD 195 INDICATE ARS, AND ILITY, IN 25 4%	57-73 ED RECUP ANNUAL PERCEN 50	RRENCE
MAGNIIISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	ETANTANEC CORD 1957 CURRENCE BILITY,	OUS PEAK F 7-73 INTERVAL, IN PERCEN	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	O ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10% 4060	INDICATE ARS, AND ILITY, IN  25 4%	57-73 ED RECUF ANNUAL PERCEN 50 2%	RRENCE
MAGNIIISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	ETANTANEC CORD 1957 CURRENCE BILITY,	OUS PEAK F 7-73 INTERVAL, IN PERCEN	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DI SCHA  2 50%  2540 1820	O ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	195 	57-73 ED RECUF ANNUAL PERCEN 50 2%	RRENCE
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	ETANTANEC CORD 1957 CURRENCE BILITY,	OUS PEAK F 7-73 INTERVAL, IN PERCEN	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DI SCHA  E  2  50%  2540 1820 1110	O ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%  4060 2800 1870	100 195 INDICATE ARS, AND ILITY, IN 25 4% 4490 3080 2200	57-73 ED RECUF ANNUAL PERCEN 50 2%	RRENCE
MAGNIIISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INS DD OF REC CATED REC NCE PROBA	ETANTANEC CORD 1957 CURRENCE BILITY,	OUS PEAK F 7-73 INTERVAL, IN PERCEN	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DI SCHA  2 50%  2540 1820	O ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	195 	57-73 ED RECUF ANNUAL PERCEN 50 2%	RRENCE

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-73

 		D I SCH/	ARGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCEN	T OF TIM	 -		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75% 	80%	85%	90%	95%
512	267	170	115	81	59	31	16	7.2	2.8	1.8	1.1	.7	.4	.2

60

90

385

317

628

518

563

465

500

414

## 14311500 LOOKINGGLASS CREEK AT BROCKWAY, OR

LOCATION.--Lat 43°07'50", long 123°27'50", in SEtSEt sec.13, T.28 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.7 mi northwest of Brockway and at mile 2.85.

DRAINAGE AREA. -- 158 mi2.

1400

734

475

317

230

168

83

35

14

3.8

1.0

0.0

0.0

0.0

0.0

PERIOD OF RECORD. -- October 1955 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 540 ft, from topographic map. Prior to Oct. 5, 1967, water-stage recorder at site 2.3 mi downstream at different datum.

REMARKS.--Some regulation by Ben Irving Reservoir 17 mi upstream on Berry Creek, capacity, 11,200 acre-ft since January 1980. Many diversions by pumping for irrigation above station. Discharge not adjusted for storage or release from Ben Irving Reservoir as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--24 years (water years 1956-79), 282  $ft^3/s$ , 204,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 35,000 ft<sup>3</sup>/s Dec. 26, 1955, gage height, 24.93 ft, site and datum then in use, from rating curve extended above 7,200 ft<sup>3</sup>/s on basis of slope—area measurement of peak flow; maximum gage height, 25.28 ft Dec. 23, 1964 (backwater from South Umpqua River, site and datum then in use); no flow at times each year prior to January 1980.

## STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	_, IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	98	14	25	1.78	.4	1						
NOVEMBER	5.3	1444	256	330	1.29	7.6	3						
DECEMBER	4.9	3323	741	726	.98	21.9	7						
JANUARY	11	1811	873	585	.67	25.7	14						
FEBRUARY	29	1954	674	444	.66	19.9	30						
MARCH	110	1105	519	320	•62	15.3	60						
APRIL	33	751	207	163	. 79	6.1	90						
MAY	19	631	87	126	1.44	2.6	120						
JUNE	3.9	57	16	13	.81	.5	183						
JULY	0.0	10	1.8	2.4		• 1							
AUGUST	0.0	2.6	•1	.5	3.79	0.0				ICS UNC	ERTAIN DU	E TO EXC	ESSIVE
SEPTEMBER	0.0	9.1	.9	2.1	2.27	0.0		ZERO EVE	ENTS.				
ARINITAT	_												
		628  PROBABILI D ON PERI				100 	 MA				OF ANNUAL		 LOW
MAGNI	TUDE AND BASE	PROBABILI	TY OF INS	STANTANEC CORD 1956 CURRENCE	DUS PEAK F 5-79	FLOW	PERIOD	BASE	ARGE, IN	CFS, FO	RECORD 19  OR INDICAT (EARS, AND	956-79  TED RECUI D ANNUAL	 RRENCE
DISCHARGE,	TUDE AND BASE	PROBABILI D ON PERI	TY OF INS	STANTANEC CORD 1956 CURRENCE	DUS PEAK F 5-79 INTERVAL, IN PERCEN	FLOW		BASE	ARGE, IN	CFS, FO	RECORD 19	956-79  TED RECUI D ANNUAL	RRENCE
MAGNI	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDII L EXCEEDA	TY OF INS	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL, IN PERCEN	  , IN	PERIOD (CON-	BASE	ARGE, IN	CFS, FO	RECORD 19  OR INDICAT (EARS, AND	956-79  TED RECUI D ANNUAL	 RRENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDII L EXCEEDA	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU-	BASE DISCH	ARGE, INTERVENCE	CFS, FO	RECORD 19 OR INDICATE YEARS, AND ABILITY,	956-79 TED RECUI D ANNUAL IN PERCEI	RRENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDAN 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ARGE, INTERVEXCEEDAN	I CFS, FO	RECORD 19 OR INDICATE YEARS, AND ABILITY, 19	956-79 TED RECUID ANNUAL IN PERCEI	RRENCE
MAGNITON	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDAN 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4%	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ARGE, INTERVEXCEEDAN	I CFS, FO	RECORD 19 OR INDICATE YEARS, AND ABILITY, 19	956-79 TED RECUID ANNUAL IN PERCEI	RRENCE
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4%	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FO VAL, IN N ICE PROBA	RECORD 19  OR INDICAT (FEARS, AND ABILITY, 19  25 4%	956-79 TED RECUID ANNUAL IN PERCEI	RRENCE
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4%	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 20%	I CFS, FO VAL, IN VICE PROB 10 10 %	DR INDICA (EARS, AND ABILITY, 25 4%	956-79 TED RECUID ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4%	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	1 CFS, FO (AL, IN NICE PROB) 10 10%	PRECORD 19 OR INDICA YEARS, AND ABILITY, 25 4% 17200 10000	956-79 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4%	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20% 	10 OF IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	DR INDICA: (FEARS, AND ABILITY, 125 4% 17200 10000 6950	956-79 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4%	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	7260 4860 3090 1940	HARGE, IN INTERVEXCEEDAN 5 20%	10 OF III CFS, FI III CFS, FI III CFS, FI III CFS, FI III III III III III III III III III	DR INDICA (EARS, AND ABILITY, 125 4% 17200 10000 6950 4140 2590	956-79 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1956 CURRENCE ABILITY, 25 4%	DUS PEAK F 5-79 INTERVAL, IN PERCEN	 IN NT	PERIOD (CON-SECU-TIVE DAYS) 1 3 7 15 30	DISCH  2 50%  7260 4860 3090 1940	HARGE, IN INTERVENCE EXCEEDAN 20% 12100 7590 4930 2990	10 CFS, FI (AL, IN ) (CE PROB) 10 10% 14700 8890 5940 3560	DR INDICA: OR INDICA: ABILITY, 25 4% 17200 10000 6950 4140	TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDA 5 20%	TY OF INS	STANTANEC CORD 1956 CURRENCE BILITY, 25 4%	DUS PEAK I 5-79 INTERVAL IN PERCEI 50 2%	FLOW	PERIOD (CON- SECU- TIVE DAYS)	7260 4860 3090 1940 1400 1120 929	12100 7590 20% 20% 20% 2990 2030 1500 1250	10 OF I	17200 10000 6950 4140 2590 1710	TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERII FOR INDII L EXCEEDAI 5 20%	TY OF INS	STANTANECCORD 1956 CURRENCE ABILITY, 25 4% B900	DUS PEAK F 5-79 INTERVAL, IN PERCEI 50 2%	FLOW  TOO  TRANSPORTED	PERIOD (CON- SECU- TIVE DAYS)	7260 4860 3090 1940 1120 929	HARGE, IN INTERVEXCEEDAN	14700 8890 5940 3560 2330 1630	DR INDICA (EARS, AND ABILITY, 125 4% 17200 10000 6950 4140 2590 1710 1420	TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%

## 14312000 SOUTH UMPOUA RIVER NEAR BROCKWAY, OR

LOCATION.--Lat 43°08'00", long 123°23'50", in SWL sec.15, T.28 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on right bank 10 ft upstream from Winston Bridge on State Highway 99, 2.5 ml northeast of Brockway, 4.2 ml downstream from Lookingglass Creek, and at mile 132.8.

DRAINAGE AREA. -- 1,670 mi2.

PERIOD OF RECORD.--December 1905 to June 1912, October 1923 to September 1926, January 1942 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 462.52 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to June 24, 1949, nonrecording gage at several sites within 400 ft of present site at various datums. June 24, 1949, to Oct. 1, 1970, at datum 461.84 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark).

REMARKS.--No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years (water years 1907-11, 1924-26, 1943-82), 2,873 ft<sup>3</sup>/s, 23.36 in/yr, 2,081,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD. -- Maximum discharge, 125,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 34.28 ft; minimum, 16 ft<sup>3</sup>/s Aug. 23, 1977

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 21, 1927, reached a stage of about 31.2 ft, present site and datum, discharge, 89,500 ft<sup>3</sup>/s. Discharge for flood of February 1890, which reached a stage 1.9 ft higher, according to local resident who lived nearby at time of both floods, has been found to be in error and should not be used.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1907-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1908-82

	MINIMUM	MAXIMUM (CFS)	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU-	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
МОМТН	(CFS)		(CFS)	(CFS)			TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%	
OCTOBER	103	6045	508	888	1.75	1.5	1	80	53	41	33	25	21	
NOVEMBER	190	13590	2814	2666	.95	8.2	3	81	54	42	33	25	21	
DECEMBER	184	19540	5877	4621	.79	17.0	7	84	56	44	36	27	22	
JANUARY	262	16010	7368	4529	•61	21.4	14	88	60	<b>4</b> 8	39	30	25	
FEBRUARY	341	15370	6445	2693	.42	18.7	30	96	67	55	46	37	31	
MARCH	1372	10950	4887	2570	.53	14.2	60	114	83	70	60	50	45	
APRIL	589	7378	3241	1547	.48	9.4	90	132	100	8 <b>7</b>	78	69	64	
MAY	446	6909	1972	1213	.62	5.7	120	172	133	117	106	95	88	
JUNE	142	3312	854	531	.62	2.5	183	404	282	236	205	175	158	
JULY	53	576	255	117	.46	.7								
AUGUST	40	332	128	57	.44	. 4								
SEPTEMBER	69	478	136	63	.46	.4				-				
ANNUAL	562	5567	2871	1040	.36	100								

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1907-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1907-82

DISCHARGE YEARS,	, IN CFS					•	PERIOD (CON-	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY. IN PERCENT							
1.25 80%	2 50 <b>%</b>	5 20% 	10 10%	25 4%	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100		
30800	49100	74300	90400	110000	124000	137000		47000	67500	72400	00200	04100	06000		
WEIGHTE	D SKEW =	- /19					1 3	43800 31700	63500 45800	72400 52200	80200 58000	84100 61000	86900 63100		
WE TOTTLE	D SKLW -	410					7	22000	31900	36800	41400	43900	46000		
							15	15100	21300	24400	27200	28800	30000		
							30	11200	15500	17500	19300	20300	21000		
							60	8780	11900	13300	14600	15300	15800		
							90	7500	10200	11600	13000	13800	14400		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1907-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
11800	7150	5240	4130	3300	2680	1790	1070	547	271	209	169	137	110	85

## 14312200 DEER CREEK NEAR ROSEBURG, OR

LOCATION.--Lat 43°13'10", long 123°16'35", in NEtSWt sec.15, T.27 S., R.5 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.6 mi upstream from Shick Creek, 3.3 mi east of Roseburg, and at mile 4.0.

DRAINAGE AREA .-- 53.2 mi2.

PERIOD OF RECORD. -- October 1955 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 498.95 ft National Geodetic Vertical Datum of 1929 (Douglas County Highway Department). Prior to July 3, 1969, nonrecording gage at site 0.5 mi downstream at datum 12.85 ft lower.

REMARKS.--No regulation. Diversions above station for logponds and many small diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--18 years, 77.4 ft3/s, 56,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,910 ft<sup>3</sup>/s Dec. 28, 1965, gage height, 14.76 ft, from floodmark, from rating curve extended above 2,200 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 13.38 and 13.67 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Oct. 29, 1950, reached a stage of 13.38 ft, from floodmarks, discharge,  $6,460 \text{ ft}^3/\text{s}$ , from rating curve extended above 2,200 ft $^3/\text{s}$  as explained above.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-73 MAGNITUDE AND PRO

MAGNITUDE AND PROBABILITY DF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-73

		MAXIMUM		STAN- DARD DEVIA- TION	COEFFI- CIENT OF		PERIOD (CON-	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
монтн	MINIMUM (CFS)	(CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	2.8	31	7.6	7.9	1.04	.8	1	.2	.1	.1	0.0			
NOVEMBER	4.0	238	65	58	.90	7.0	3	•3	.1	- 1	0.0			
DECEMBER	11	706	212	182	.86	22.8	7	.5	.2	-1	. 1			
JANUARY	20	459	222	138	•62	23.8	14	.5	.2	.2	.1			
FEBRUARY	43	<b>35</b> 9	167	96	•57	17.9	30	.8	.4	.3	.2			
MARCH	31	320	141	84	.60	15.1	60	1.3	.7	•6	.4			
APRIL	19	224	61	48	.78	6.6	90	1.6	1.1	•9	•7			
MAY	5.3	220	38	50	1.33	4.0	120	2.3	1.6	1.4	1.2			
JUNE	3.3	51	11	11	.98	1.2	183	5.5	3.4	2.7	2.2			
JULY	.6	7.2	2.8	2.0	.71	.3				<b>-</b>				
AUGUST	.3	2.5	1.3	.7	• 57	.1								
SEPTEMBER	.5	17	2.9	3.7	1.28	.3								
ANNUAL	33	151	77	26	.34	100								

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-73

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-73

				RECURRENC ROBABILITY			PERIOD (CON-	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY. IN PERCENT							
1.25 80%	2 50% 	5 20% 	10 10%	25 4 <b>%</b> 	50 2%	100 1,5 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%		
2260	3680	5630	6870	8350											
							1	2190	3160	3570	3900				
WEIGHTED	SKEW =	489					3	1400	1890	2080	2230				
							7	836	1200	1400	1590				
							15	502	741	889	1060				
							30	379	518	591	666				
							60	286	378	422	464				
							90	228	306	349	396				

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-73

			DISCH	ARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCEN	T OF TIM	1E		
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
_	349	200	130	93	70	53	30	16	7.8	3.8	3.0	2.3	1.8	1.2	.6

### 14312500 LAKE CREEK NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°11'10", long 122°09'55", in NW&SW& sec.30, T.27 S., R.6 E., Douglas County, Hydrologic Unit 17100301, Umpqua Natlonal Forest, on right bank 260 ft downstream from outlet of Diamond Lake, 1.6 mi northwest of town of Diamond Lake, and at mile 10.7.

DRAINAGE AREA .-- 54.9 mi2.

PERIOD OF RECORD.--May 1922 to September 1925 (no winter records), October 1926 to September 1929, April, July, August 1930, October 1930 to September 1953, October 1971 to October 1977, February 1978 to September 1982. Prior to October 1971 published as "at Diamond Lake, near Fort Klamath."

GAGE.--Water-stage recorder. Altitude of gage is 5,180 ft, from river-profile map. Prior to May 26, 1931, nonrecording gage at site 300 ft downstream at different datum. May 26, 1931, to 0ct. 6, 1933, nonrecording gage at present site and datum.

REMARKS, --- Flow regulated by gates and fish racks at lake outlet. No diversion above station.

AVERAGE DISCHARGE.--36 years (water years 1927-29, 1931-53, 1972-77, 1979-82), 56.2 ft<sup>3</sup>/s, 40,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 336 ft<sup>3</sup>/s Jan. 1, 1943, gage height, 2.8 ft, from rating curve extended above 120 ft<sup>3</sup>/s; no flow Aug. 25-27, 1931, Sept. 19, 1977.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1927-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1935-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	- 11	NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	INUAL NO	N
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	12	94	41	24	.57	6.0	1	6.0	2.5	1.5	1.0.	.6	
NOVEMBER	15	133	60	29	.48	8.7	3	7.5	3.3	2.0	1.4	.8	
DECEMBER	33	139	77	27	.35	11.2	7	9.1	4.4	2.9	2.0	1.3	
JANUARY	34	142	82	25	.30	11.9	14	13	6.5	4.4	3.0	1.9	
FEBRUARY	34	140	76	22	. 29	11.0	30	16	10.0	7.5	5.8	4.3	
MARCH	29	134	70	22	.31	10.1	60	23	15	12	9.6	7.1	
APRIL	5.0	106	59	20	.34	8.5	90	26	18	15	12	9.4	
MAY	30	107	60	19	.32	8.7	120	30	22	18	15	13	
JUNE	23	149	67	34	.50	9.7	183	37	28	24	22	19	
JULY	9.5	81	41	19	.47	6.0							
AUGUST	6.2	60	28	12	.44	4.1							
SEPTEMBER	7.4	58	28	13	.47	4.0							
ANNUAL	37	91	58	17	• 29	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1927-82

DISCHARGE, YEARS, A							PERIOD (CON-		ARGE, IN INTERVA	AL, ÍN Y	EARS, AN	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 <b>4%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100
							1	120	158	187	225	257	
WEIGHTED	SKEW =						3	116	153	179	214	242	
							7	112	144	167	198	221	
							15	102	130	150	175	195	
							30	93	118	134	155	171	
							60	85	107	122	141	156	
							90	80	100	115	133	148	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1927-82

			DISCH	MARGE, II	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TI	ME	_	
•	5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85 <b>%</b>	90%	95 <b>%</b>
-	117	100	92	84	78	73	64	55	46	37	33	30	26	21	15

### 14315500 NORTH UMPOUA RIVER AT TOKETEE FALLS, OR

LOCATION.--Lat 43°15'50", long 122°25'20", in E-1/2 sec.35, T.26 S., R.3 E., Douglas County, Hydrologic Unit 17100301, 0.1 mi downstream from Clearwater River and 0.5 mi upstream from Toketee Falls.

DRAINAGE AREA .-- 339 mi2.

5%

1540

10%

1340

15%

1200

20%

1090

25%

1000

30%

938

40%

846

50%

780

60%

720

70%

670

75%

647

80%

622

85%

599

90%

580

95%

553

PERIOD OF RECORD.--July 1925 to September 1945, April 1946 to September 1948.

CAGE.--Water-stage recorder. Datum of gage is 2,373 ft National Geodetic Vertical Datum of 1929 (levels by California-Oregon Power Co.). Feb. 26, 1908, to July 20, 1909, staff gage, and Dec. 19, 1914, to Sept. 30, 1917, water-stage recorder, at datum 0.50 ft lower.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--22 years (water years 1926-45, 1947-48), 875 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft<sup>3</sup>/s Dec. 31, 1942, gage height, 5.90 ft, from rating curve extended above 1,900 ft<sup>3</sup>/s by logarithmic plotting; minimum, 475 ft<sup>3</sup>/s Nov. 27-29, Dec. 12, 14, 1931.

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	., IN YE	OR INDICATARS, AND A	ANNUAL N	)N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	512	820	632	78	.12	6.0	1	574	532	514	501		
NOVEMBER	494	1095	736	164	.22	7.0	3	577	534	515	501		
DECEMBER	518	1685	842	260	.31	8.0	7	581	537	517	503		
JANUARY	570	1513	876	240	•27	8.3	14	587	542	522	507		
EBRUARY	584	1350	920	217	.24	8.8	30	594	547	527	512		
MARCH	675	1307	965	180	.19	9.2	60	603	555	535	520		
APRIL	665	1741	1129	245	.22	10.7	90	613	561	538	521		
4A Y	749	1741	1248	329	.26	11.9	120	625	568	542	523		
JUNE	599	2028	1072	362	.34	10.2	183	670	598	564	538		
JULY	545	1131	776	154	. 20	7.4							
AUGUST	510	877	675	97	.14	6.4							
				81	.13	<i>c</i> •							
SEPTEMBER	504	807	636	01	•13	6.1							
ANNUAL	635	1246 	875 TY OF IN	143 	.16 	100	 Ma(				OF ANNUAL	-	
MAGNIT	635 TUDE AND BASE	1246 PROBABILI D ON PERIO	875 TY OF IN	143 ISTANTANE CORD 192 CURRENCE	.16 	100  FLOW 	PERIOD	BASE DISCH	ON PER	CFS, FO	RECORD 19 PR INDICAT EARS, AND	26-48 ED RECUP	RENCE
MAGNIT DISCHARGE, YEARS, A	635  TUDE AND BASE  IN CFS,	PROBABILI D ON PERII FOR INDII L EXCEEDA	875 TY OF IN OD OF RE	143 STANTANE CORD 192 CURRENCE	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 	PERIOD (CON-	BASE DISCH	ON PER	CFS, FO	RECORD 19	26-48 ED RECUP	RENCE
MAGNIT DISCHARGE, YEARS, A	635  TUDE AND BASE  IN CFS,	1246 PROBABILIT D ON PERIT	875 TY OF IN OD OF RE CATED RE NCE PROB	143 STANTANE CORD 192 CURRENCE ABILITY,	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU-	BASE DISCH	O ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO	RECORD 19 PR INDICAT PEARS, AND BILITY, I	26-48 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT	635  TUDE AND BASE  IN CFS,	PROBABILI D ON PERII FOR INDII L EXCEEDA	875 TY OF IN OD OF RE	143 STANTANE CORD 192 CURRENCE	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 	PERIOD (CON-	BASE DISCH	ON PER	CFS, FO	RECORD 19 PR INDICAT EARS, AND	26-48 ED RECUP	RRENCE
MAGNIT DISCHARGE, YEARS, A	635  TUDE AND BASE  IN CFS,	PROBABILII D ON PERII FOR INDII L EXCEEDAI	875  TY OF IN DD OF RE  CATED RE NCE PROB	143 STANTANE CORD 192 CURRENCE ABILITY,	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	O ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FC AL, IN Y CE PROBA	RECORD 19 RECORD 19 RECORD 19 REARS, AND RECORD 19 RECORD 19 RECORD 19 RECORD 19 RECORD 19 RECORD 19 RECORD 19 RECORD 19	P26-48  ED RECUF  ANNUAL  N PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	635 TUDE AND BASE IN CFS, IND ANNUAL 2 50%	PROBABILITO NO PERIODE SERVICE	875  TY OF IN DD OF RE  CATED RE NCE PROB	143 ISTANTANE CORD 192 CURRENCE ABILITY, 25 4%	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50%	O ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FC AL, IN Y CE PROBA 10 10%	RECORD 19 RE INDICAT FEARS, AND BILITY, I 25 4% 3930	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	635  TUDE AND BASE  IN CFS, AND ANNUAL  2 50%	PROBABILITO NO PERIODE SERVICE	875  TY OF IN DD OF RE  CATED RE NCE PROB	143 ISTANTANE CORD 192 CURRENCE ABILITY, 25 4%	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2220 1960	O ON PER ARGE, IN INTERV EXCEEDAN 5 20% 2940 2520	CFS, FC AL, IN Y CE PROBA 10 10%	RECORD 19 PR INDICAT FEARS, AND BILITY, I 25 4% 3930 3260	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	635 TUDE AND BASE IN CFS, IND ANNUAL 2 50%	PROBABILITO NO PERIODE SERVICE	875  TY OF IN DD OF RE  CATED RE NCE PROB	143 ISTANTANE CORD 192 CURRENCE ABILITY, 25 4%	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2220 1960 1680	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 2940 2520 2090	CFS, FC AL, IN Y CE PROBA 10 10% 3390 2860 2350	RECORD 19 REINDICAT FEARS, AND BILITY, I  25 4\$  3930 3260 2660	26-48  TED RECUF  ANNUAL  N PERCEN  50 2%	100 13
MAGNIT	635 TUDE AND BASE IN CFS, IND ANNUAL 2 50%	PROBABILITO NO PERIODE SERVICE	875  TY OF IN DD OF RE  CATED RE NCE PROB	143 ISTANTANE CORD 192 CURRENCE ABILITY, 25 4%	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2220 1960 1680 1500	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 2940 2520 2090 1830	CFS, FCAL, IN YCE PROBA  10 10 3390 2860 2350 2030	RECORD 19 REINDICAT EARS, AND BILITY, I 25 4 3930 3260 2260 2260	26-48 FED RECUF ANNUAL N PERCEN 50 2%	100 1,8
MAGNIT DISCHARGE, YEARS, A 1.25 80%	635 TUDE AND BASE IN CFS, IND ANNUAL 2 50%	PROBABILITO NO PERIODE SERVICE	875  TY OF IN DD OF RE  CATED RE NCE PROB	143 ISTANTANE CORD 192 CURRENCE ABILITY, 25 4%	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2220 1960 1680 1500 1400	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$ 2940 2520 2090 1830 1670	CFS, FC AL, IN Y CE PROBA 10 10% 3390 2860 2350 2030 1820	RECORD 19  IR INDICAT FEARS, AND BILITY, I  25 4\$  3930 3260 2660 2660 2260 1990	26-48 FED RECUF ANNUAL N PERCEN 50 2%	100 13
MAGNIT DISCHARGE, YEARS, A 1.25 80%	635 TUDE AND BASE IN CFS, IND ANNUAL 2 50%	PROBABILITO NO PERIODE SERVICE	875  TY OF IN DD OF RE  CATED RE NCE PROB	143 ISTANTANE CORD 192 CURRENCE ABILITY, 25 4%	.16 OUS PEAK F 6-48 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2220 1960 1680 1500	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 2940 2520 2090 1830	CFS, FCAL, IN YCE PROBA  10 10 3390 2860 2350 2030	RECORD 19 REINDICAT EARS, AND BILITY, I 25 4 3930 3260 2260 2260	26-48 FED RECUF ANNUAL N PERCEN 50 2%	100 1%

## 14316500 NORTH UMPQUA RIVER ABOVE COPELAND CREEK, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°17'45", long 122°32'10", in NWL sec.24, T.26 S., R.2 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on left bank 0.6 ml upstream from Copeland Creek, 4.7 mi west of town of Toketee Falls, and at mile 67.2.

DRAINAGE AREA. -- 475 mi2.

PERIOD OF RECORD.—September 1949 to September 1982. Monthly discharge only September 1949, published in WSP 1318. Prior to October 1952, published as "above Copeland Creek."

GAGE.--Water-stage recorder. Altitude of gage is 1,580 ft, from river-profile map. Prior to Aug. 1, 1976, on right bank at same datum.

REMARKS.--Considerable fluctuation caused by powerplants upstream; flow slightly regulated by Diamond Lake and by Lemolo Lake. No diversion above station.

AVERAGE DISCHARGE. -- 33 years, 1,503 ft3/s, 1,089,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 40,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.1 ft, from floodmark, from rating curve extended above 7,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 370 ft<sup>3</sup>/s Sept. 30, 1981; minimum daily, 565 ft<sup>3</sup>/s Sept. 13, 1959.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1950-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1951-82

		14 <b>8</b> 37 1 145 104	WEAU	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEA	R INDICA RS, AND A BILITY,	ANNUAL N	DN-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100
OCTOBER	758	1568	949	172	.18	5.3	1	659	604	582	567	554	
NOVEMBER	805	2298	1310	396	.30	7.3	3	703	628	597	575	553	
DECEMBER	803	5163	1845	957	.52	10.2	7	738	649	612	585	558	
ANUARY	788	3418	1863	727	.39	10.3	14	763	675	637	609	581	
EBRUARY	670	3254	1846	575	.31	10.2	30	787	697	658	629	600	
IARCH	873	4221	1725	591	.34	9.5	60	816	730	693	666	638	
PRIL	1065	2876	1857	442	. 24	10.3	90	844	755	715	685	6 <b>5</b> 5	
!AY	1066	3191	2077	547	• 26	11.5	120	879	782	740	708	676	
IUNE	904	2933	1726	601	.35	9.6	183	1010	880	827	790	754	
ULY	689	1652	1102	264	.24	6.1							
UGUST	684	1178	904	159	.18	5.0							
EPTEMBER	653	1107	860	122	.14	4.8							
ANNUAL	897	2080	1503	307	.20	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1950-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1950-82

YEARS, A							PERIOD (CON-		INTER	VAL, ÍN	YEARS, A	ATED RECU ND ANNUAL IN PERCE	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
4570	7650	13700	19200	28000	36300								
							1	5870	9900	13300	18400	23000	
WEIGHTED	SKEW =	•453					3	4780	7640	10000	13700	16900	
							7	3890	5700	7100	9130	10800	
							15	3180	4290	5060	6070	6840	
							30	2770	3540	4030	4620	5040	
							60	2360	2940	3290	3700	4000	
							90	2200	2680	2960	3270	3490	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1950-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIM	E		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
2920	2480	2200	2000	1830	1680	1460	1260	1110		944	891	835	779	713

## 14316700 STEAMBOAT CREEK NEAR GLIDE, OR

LOCATION.--Lat 43°21'00", long 122°43'40", in N-1/2 sec.32, T.25-1/2 S., R.1 E., Douglas County, Hydrologic Unit 17100301, in Umpqua National Forest, on right bank in Canton Creek Forest Service Park, 200 ft downstream from Canton Creek, 19 mi northeast of Glide, and at mile 0.5.

DRAINAGE AREA. -- 227 mi2.

PERIOD OF RECORD.--Water year 1956 (annual maximum only), June 1956 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,128.55 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Public Roads). Oct. 7, 1955, to June 13, 1956, nonrecording gage at site 100 ft upstream at same datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--26 years, 735 ft<sup>3</sup>/s, 43.97 in/yr, 532,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 25.6 ft, from floodmark, from rating curve extended above 13,000 ft<sup>3</sup>/s on basis of slope-area measurement at 17.96 ft; minimum, 30 ft<sup>3</sup>/s Sept. 15-17, 1973.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	44	536	172	120	•70	1.9	1	36	32	31	30	30	
NOVEMBER	77	2887	869	656	.75	9.8	3	36	33	31	31	30	
DECEMBER	63	5391	1562	1146	.73	17.6	7	37	34	32	31	30	
JANUARY	108	3415	1564	978	.63	17.7	14	39	35	33	33	32	
FEBRUARY	141	2861	1367	664	. 49	15.4	30	42	38	36	35	34	
MARCH	383	2774	1260	661	•52	14.2	60	49	42	40	38	36	
APRIL	287	1406	964	304	.32	10.9	90	56	48	45	43	41	
MAY	285	1337	626	270	.43	7.1	120	71	59	54	51	48	
JUNE	105	544	248	119	.48	2.8	183	152	116	100	89	77	
JULY	57	149	91	26	-28	1.0							
AUGUST	39	158	61	24	.40	.7							
SEPTEMBER	39	187	67	33	•50	.8							
ANNUAL	239	1253	735	222	.30	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1957-82

					CE INTER		PERIOD (CON-	DISC	INTER	VAL, ÍN '	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
10000	14400	21300	26500	33900	40000								
							1	11100	16200	18800	21500	23000	
WEIGHTE	D SKEW =	.310					3	7390	10900	13000	15400	17000	
							7	4900	7190	8570	10200	11200	
							15	3270	4620	5410	6320	6920	
							30	2510	3410	3930	4520	4920	
							60	1990	2700	3120	3600	3940	
							90	1690	2270	2630	3050	3360	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95 <b>%</b>
2740	1720	1300	1060	872	731	512	329	187	100	79	66	57	49	41

# 14317500 NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OR

LOCATION.--Lat 43°19'40", long 123°00'00", in NW¼ sec.12, T.26 S., R.3 W., Douglas County, Hydrologic Unit 17100301, 0.5 mi upstream from Rock Creek and 5 mi northeast of Glide.

DRAINAGE AREA .-- 886 mi2.

6010

4660

3870

3290

2840

PERIOD OF RECORD.--July 1924 to September 1945.

GAGE.--Water-stage recorder. Altitude of gage is 770 ft, from river-profile map.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--21 years (water years 1925-45), 2,274 ft3/s, 1,648,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 53,000 ft<sup>3</sup>/s Feb. 20, 1927, gage height, 20.18 ft, from rating curve extended above 18,000 ft<sup>3</sup>/s by logarithmic plotting; minimum, 521 ft<sup>3</sup>/s Oct. 16, 1931, gage height, 1.86 ft.

STATISTICAL SUMMARIES

		MANIMUM		STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICATARS, AND ABILITY,	ANNUAL N	-NC
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	649	1588	889	252	.28	3.3	1	675	608	577	553		
OVEMBER	651	-6205	2208	1615	.73	8.1	3	678	614	584	561		
ECEMBER	943	10250	2928	2070	.71	10.7	7	684	620	590	566		
ANUARY	818	7197	3377	1738	-51	12.4	14	694	630	599	576		
EBRUARY	1338	7162	3684	1754	.48	13.5	30	706	643	614	592		
MARCH	1399	7259	3402	1469	•43	12.5	60	731	661	630	606		
APRIL	1321	6063	3430	1283	.37	12.6	90	751	677	644	619		
IAY IUNE	1183 833	4503 4958	2778 1980	1079 1001	.39	10.2 7.2	120 183	779 985	702 827	674 765	655 723		
	696			249	.51 .24	7.2 3.8	183	967	821	/02	123		
JULY NUGUST	588	1631 1098	1049 813	123	.15	3.0							
SEPTEMBER	588	997	774	106	.14	2.8							
NNUAL	1384	3942	2257	672	.30	100							
MAGNIT			TY OF IN	STANTANE	OUS PEAK F		 MA				OF ANNUAL		 .0₩
SCHARGE, YEARS, A	BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE	OUS PEAK F 5-45 INTERVAL, IN PERCE	  , IN	PERIOD (CON-	BASI	ED ON PEI	RIOD OF F		25-45 ED RECUF	RENCE
SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU-	BASI DISCI	ARGE, II	RIOD OF F	RECORD 19 DR INDICAT YEARS, AND ABILITY, I	25-45 ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE	OUS PEAK F 5-45 INTERVAL, IN PERCE	  , IN	PERIOD (CON-	BASI	ED ON PEI	RIOD OF F	RECORD 19 DR INDICAT (EARS, AND	25-45 ED RECUF	RRENCE
YEARS, A	BASE IN CFS, IND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU- TIVE	BASI DISCH	HARGE, II EXCEEDAN	RIOD OF F	RECORD 19 DR INDICAT YEARS, AND ABILITY, I	ED RECUF ANNUAL N PERCEN	RRENCE
YEARS, A	BASE IN CFS, IND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE IABILITY,	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU- TIVE	BASI DISCH	HARGE, II EXCEEDAN	RIOD OF F	RECORD 19 DR INDICAT YEARS, AND ABILITY, I	ED RECUF ANNUAL N PERCEN	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE IABILITY,	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTERN EXCEEDAN 5 20%	10 OF I	RECORD 19 DR INDICAT YEARS, AND ABILITY, 1	P25-45  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE IABILITY,	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTERN EXCEEDAN 5 20\$ 24700 18400 13200	10 OF II V CFS, FC VAL, IN N VICE PROB/ 10 10% 30700 22900 16000	OR INDICAT YEARS, AND ABILITY, I 25 4% 39500 29500 19900	PED RECUF D ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE IABILITY,	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 17000 12700 9420 7070	HARGE, II INTER EXCEEDAN 5 20% 24700 18400 13200 9630	10 OF F	25 4 3 39500 19900 14100	PED RECUP D ANNUAL N PERCEN 50 2%	RRENCE
1.25 80\$	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE IABILITY,	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 2 50% 17000 12700 9420 7070 5520	HARGE, III INTER EXCEEDAI 5 20% 24700 18400 13200 9630 7180	10 OF IN IN IN IN IN IN IN IN IN IN IN IN IN	RECORD 19 OR INDICAT (FARS, AND ABILITY, I 25 4% 39500 29500 19900 14100 9760	25-45 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE IABILITY,	OUS PEAK F 5-45 INTERVAL, IN PERCEI	FLOW . IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCI 2 50% 17000 12700 9420 7070 5520 4450	18400 13200 9630 7180 5840	30700 22900 116000 11500 8310 6870	39500 29500 19900 14100 9760 8310	PED RECUP D ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 192 CURRENCE ABILITY, 25 4%	OUS PEAK F 5-45 INTERVAL IN PERCEI 50 2%	FLOW . IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH 2 50% 17000 12700 9420 7070 5520 4450 4040	HARGE, II INTER EXCEEDAN 5 20 \$ 24700 13200 7180 5840 5290	30700 22900 11500 8310 6870 6180	RECORD 19 OR INDICAT (FARS, AND ABILITY, I 25 4% 39500 29500 19900 14100 9760	25-45 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE  CATED RE NCE PROB  10 10 8700 4	ISTANTANE CORD 192 CURRENCE ABILITY, 25 4% 8100	OUS PEAK F 5-45 INTERVAL, IN PERCEN	IEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 17000 12700 9420 7070 5520 4450 0F RECC	HARGE, II INTER: EXCEEDAI 5 20 \$ 24700 13200 7180 5840 5290 DRD 1925-	N CFS, F(AL, IN NCE PROB/ 10 10% 30700 22900 16000 11500 8310 6870 6180	39500 29500 1900 1900 1900 1370 3730	25-45 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE  CATED RE NCE PROB  10 10 8700 4	ISTANTANE CORD 192 CURRENCE ABILITY, 25 4% 8100	OUS PEAK F 5-45 INTERVAL, IN PERCEN	FLOW  IN  NT  100  118	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 17000 12700 9420 7070 5520 4450 0F RECC	HARGE, II INTER: EXCEEDAI 5 20 \$ 24700 13200 7180 5840 5290 DRD 1925-	N CFS, F(AL, IN NCE PROB/ 10 10% 30700 22900 16000 11500 8310 6870 6180	39500 29500 1900 1900 1900 1370 3730	25-45 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE

1920

1480

1170

2460

934

860

807

756

710

**65**6

### 14317600 ROCK CREEK NEAR GLIDE, OR

LOCATION.--Lat 43°20'45", long 122°59'30", in SE‡SE‡ sec.36, T.25 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on left bank 0.3 mi downstream from McComas Creek, 5.8 mi northeast of Glide, and at mile 1.2.

DRAINAGE AREA. -- 97.4 mi2.

1300

877

680

557

460

271

382

174

102

62

47

38

31

27

23

PERIOD OF RECORD.--Water years 1956-57 (annual maximums only), June 1957 to June 1973.

GAGE.--Water-stage recorder. Altitude of gage is 940 ft, from topographic map. Nov. 8, 1955, to June 16, 1957, nonrecording gage and June 17, 1957, to Sept. 30, 1965, water-stage recorder at site 800 ft downstream at different datum.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--15 years (water years 1958-72),  $373 \text{ ft}^3/\text{s}$ , 52.01 in/yr, 270,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 14.83 ft; minimum, 14 ft<sup>3</sup>/s Sept. 5-11, 1966.

	MINIMIN	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	OR INDICATARS, AND ABILITY,	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER NOVEMBER	24 105	198 833	94 469	51 251	.54 .54	2.1	1 3	20 20	17 17	16 16	15 15		
DECEMBER		2564									15		
	151		757	601	.79	16.9	7	21	18	16			
JANUARY	118	1609	876	499	-57	19.5	14	22	19	17	16		
FEBRUARY	317	1254	686	299	.44	15.3	30	24	20	18	17		
MARCH	221	1338	669	340	•51	14.9	60	28	23	21	20		
APRIL	164	716	438	157	.36	9.8	90	31	26	23	22		
MAY	102	679	280	152	.54	6.2	120	39	31	28	26		
JUNE	47	174	108	39	. 36	2.4	183	80	62	53	46		
JULY	34	87	50	15	.30	1.1							
AUGUST	19	45	30	6.6	• 22	•7							
SEPTEMBER	18	62	33	13	.39	•7							
ANNUAL	219	567	373	90	.24	100							
MAGNIT		PROBABILI D ON PERIO				FLOW	MAG				OF ANNUAL		.OW
DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD 1957	7-72  INTERVAL	 , IN	PERIOD	BASE	D ON PER HARGE, IN INTERV	CFS, FO	RECORD 19 OR INDICAT	958-72  FED RECUR O ANNUAL	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC	OD OF RE	CORD 1957 CURRENCE ABILITY,	INTERVAL	, IN NT	PERIOD (CON-	BASE	D ON PER HARGE, IN INTERV	CFS, FO	RECORD 19 DR INDICAT	958-72  FED RECUR O ANNUAL	RENCE
DISCHARGE, YEARS, A	IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU-	BASE DISCH	IARGE, IN INTERV	CFS, FO	RECORD 19  OR INDICAT YEARS, AND ABILITY, I	958-72 FED RECUP O ANNUAL IN PERCEN	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC	OD OF RE	CORD 1957 CURRENCE ABILITY,	INTERVAL	, IN NT	PERIOD (CON-	BASE	D ON PER HARGE, IN INTERV	CFS, FO	RECORD 19 OR INDICAT	958-72  FED RECUR O ANNUAL	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN	CFS, FC AL, IN CE PROB	RECORD 19 DR INDICAT YEARS, AND ABILITY, I	958-72 FED RECUF O ANNUAL IN PERCEN	RRENCE IT 100
OISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN	CFS, FC AL, IN CE PROB	RECORD 19 DR INDICAT YEARS, AND ABILITY, I	958-72 FED RECUF O ANNUAL IN PERCEN	RRENCE IT 100
OISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FCAL, IN CE PROB	RECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%	P58-72 FED RECUFO ANNUAL IN PERCEN	RRENCE
DISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAD	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN CE PROBA	DR INDICAT YEARS, AND ABILITY, I 25 4%	P58-72 FED RECUP O ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAD	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4410 3260	INTERVENTION	CFS, FGAL, IN CE PROB. 10 10%	PRECORD 19 DR INDICAT YEARS, AND ABILITY, 1 25 4% 13000 9040	P58-72  FED RECUF  ANNUAL  N PERCEN  50  2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAD	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 4410 3260 2300 1640	ARGE, IN INTERVEXCEEDAN  5 20%  6950 5060 3460 2350	10 OF I	DR INDICAT YEARS, AND ABILITY, I 25 4% 13000 9040 5910 3520	P58-72  FED RECUF  O ANNUAL  IN PERCEN  50  2%	RRENCE IT 100
DISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAD	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4410 3260 2300 1640 1220	ARGE, IN INTERVEXCEEDAN  5 20%  6950 5060 3460 2350 1690	CFS, FGAL, IN CE PROB/ 10 10% 9240 6610 4430 2850 2040	DR INDICAT YEARS, AND ABILITY, I 25 4% 13000 9040 5910 3520 2530	P58-72 FED RECUF ANNUAL IN PERCEN 50 2%	RRENCE IT
1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAD	OD OF RE CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 4410 3260 2300 1640	ARGE, IN INTERVEXCEEDAN  5 20%  6950 5060 3460 2350	10 OF I	DR INDICAT YEARS, AND ABILITY, I 25 4% 13000 9040 5910 3520	FED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAD	CATED RE NCE PROB	CORD 1957 CURRENCE ABILITY, 25 4% 8400	INTERVAL IN PERCE	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4410 3260 2300 1640 1220 995 855	IARGE, IN INTERVEX EXCEEDAN 50 5060 3460 1350 1110	CFS, F(AL, IN CE PROB)  10 10%  9240 6610 4430 2850 2040 1610 1300	DR INDICAT YEARS, AND ABILITY, I 25 4% 13000 9040 5910 3520 2530 1970	P58-72 FED RECUF ANNUAL IN PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A 1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	DOD OF RECOME OF THE OF RECOME OF THE OF RECOME OF THE OF RECOME OF TH	CORD 1957 CURRENCE ABILITY, 25 4% 8400	INTERVAL IN PERCE 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH  2 50%  4410 3260 2300 1640 1220 995 855	10 ON PER 10 INTERV EXCEEDAN 5 20% 6950 5060 3460 2350 1690 1350 1110 RD 1958-	CFS, FCAL, IN CE PROB/ 10 10% 9240 6610 4430 2850 2040 1610 1300	13000 9040 95910 3520 2530 1970	P58-72 FED RECUF ANNUAL IN PERCEN 50 2%	RRENCE IT

### 14318000 LITTLE RIVER AT PEEL, OR

LOCATION.--Lat 43°15'10", long 123°01'30", in NWt sec.2, T.27 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on left bank 0.6 mi southeast of Peel, 0.9 mi from Cavitt Creek, and at mile 6.3.

DRAINAGE AREA -- 177 mi2.

PERIOD OF RECORD. -- August 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 828.33 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Small diversions for rural domestic use and irrigation above station.

AVERAGE DISCHARGE.--28 years, 468 ft<sup>3</sup>/s, 35.91 in/yr, 339,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,100 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 19.63 ft, from rating curve extended above 5,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 16.55 ft; minimum, 14 ft<sup>3</sup>/s Sept. 2, 9, 10, 28, 29, 1967, Sept. 25-27, 1974, Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Nov. 22, 23, 1953, reached a stage of 20.6 ft, from floodmark, discharge, 22,700 ft $^3$ /s, from rating curve extended above 5,900 ft $^3$ /s on basis of slope-area measurement at gage height 16.55 ft.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1955-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1956-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	0 <b>N-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	24	366	106	87	.82	1.9	1	19	16	15	14	. 13	
NOVEMBER	41	2162	563	471	.84	10.0	3	19	16	15	14	13	
DECEMBER	35	3090	1004	719	.72	17.9	7	20	17	16	15	14	
JANUARY	53	2122	1008	609	.60	17.9	14	20	18	17	16	15	
FEBRUARY	70	1571	775	338	.44	13.8	30	23	19	18	17	16	
MARCH	249	1757	802	393	.49	14.3	60	27	22	20	19	18	
APRIL	237	1065	637	207	.32	11.3	90	32	26	24	23	21	
MAY	153	956	438	201	.46	7.8	120	42	34	30	28	26	
JUNE	58	371	162	86	.53	2.9	183	97	69	57	48	40	
JULY	32	105	55	19	.35	1.0							
AUGUST	20	89	33	14	.42	.6							
SEPTEMBER	17	132	36	22	•60	•6							
ANNUAL	158	805	467	145	.31	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1955-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1955-82

					ICE INTER		PERIOD (CON-		INTER	VAL, ÍN	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20% 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
6560	9710	14100	16900	20400	23000								
							1	6570	9760	11600	13800	15200	
WEIGHTED	SKEW =	214					3	4600	6740	8080	9680	10800	
							7	2980	4370	5280	6430	7280	
							15	2020	2850	3380	4010	4460	
							30	1570	2120	2460	2850	3130	
					•		60	1240	1690	1960	2270	2490	
							90	1070	1430	1650	1900	2070	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1955-82

		DISCH	ARGE, II	CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 1680	1110	862	702	581	490	342	215	116	60	46	37	31	26	22

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

185

### 14318500 NORTH UMPQUA RIVER NEAR GLIDE, OR

LOCATION.--Lat 43°18'20", long 123°07'00", in SW\ sec.13, T.26 S., R.4 W., Douglas County, Hydrologic Unit 17100301, about 1.0 mi downstream from Little River and 1.0 mi west of Glide.

DRAINAGE AREA .-- 1,210 mi2.

PERIOD OF RECORD. -- September 1915 to March 1919, October 1928 to September 1938.

MONTHLY AND ANNUAL MEAN DISCHARGES 1916-38

GAGE.--Staff gage. Altitude of gage is 645 ft, river-profile survey. Sept. 1, 1915, to Oct. 17, 1922, staff gage 150 ft downstream at datum 0.60 ft higher.

REMARKS. -- No diversion or regulation above station.

AVERAGE DISCHARGE.--14 years (water years 1916-18, 1929-38), 3,115 ft3/s, 2,257,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft<sup>3</sup>/s Mar. 19, 1932, gage height, 17.3 ft; from graph based on gage readings; minimum, 552 ft<sup>3</sup>/s Aug. 27-30, Sept. 27, 1931, gage height, 0.84 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 22.6 ft Nov. 22, 1909, discharge, 94,000 ft<sup>3</sup>/s, from rating curve extended above 40,000 ft<sup>3</sup>/s by logarithmic plotting.

## STATISTICAL SUMMARIES

BASED ON PERIOD OF RECORD 1917-38 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE STAN-DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-CIENT OF DEVIA-٥F (CON-EXCEEDANCE PROBABILITY, IN PERCENT MINIMUM MAXIMUM MEAN TION VARI-ANNUAL SECU-MONTH (CES) (CES) (CES) (CES) ATION RUNOFF TIVE 100 2% 50% 20% 10% 5% DAYS) 1% OCTOBER 712 1502 957 229 2.6 716 630 564 635 NOVEMBER 58**2**6 2590 1824 595 565 \_\_ 664 .70 6.9 3 723 --DECEMBER 1159 6869 3703 1715 9.9 7 730 642 603 573 JANUARY 992 10290 4807 2496 .52 12.8 14 742 653 612 581 FEBRUARY 1772 10260 4708 2485 .53 12.6 30 760 671 629 596 MARCH 2525 11730 5692 2377 .42 15.2 60 787 689 644 610 APRIL 1976 9309 5409 2099 .39 14.4 90 818 708 657 618 MAY 1346 7629 3888 1763 . 45 10.4 120 860 742 689 649 JUNE 1049 6406 2650 1608 .61 1180 919 750 7.1 183 819 JULY 743 2497 1324 548 3.5 .41 AUGUST 613 1270 915 192 .21 SEPTEMBER 624 2.2 1087 835 ANNUAL 1879 4283 3114 799 . 26 100 MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1916-38 BASED ON PERIOD OF RECORD 1916-38

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, ÍN	OR INDICA <sup>.</sup> YEARS, ANI ABILITY.	ANNUAL.	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
26800	34600	44400	50500	57700									
							1	27500	36400	42800	51700		
WEIGHTE	D SKEW =	085					3	19200	26300	32200	41000		
							7	14700	19100	22200	26100		
							15	10900	13700	15600	18100		
							30	8570	10200	11000	12000		
							60	6980	8320	9050	9830		
							90	6180	7420	8070	8730		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1916-38

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	=		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
8610	6680	5700	4940	4230	3640	2750	1950	1380	1060	964	892	826	765	697

## 14319200 SUTHERLIN CREEK AT SUTHERLIN, OR

LOCATION.--Lat 43°23'20", long 123°18'10", in SW½ sec.16, T.25 S., R.5 W., Douglas County, Hydrologic Unit 17100301, on right bank at downstream side of Waite Street bridge in Sutherlin, 1.5 mi upstream from Cooper Creek, and at mile 8.4.

DRAINAGE AREA.--16.4 mi2.

122

61

38

28

21

16

PERIOD OF RECORD.--October 1955 to September 1967.

GAGE.--Staff gage read once or twice daily and crest-stage gage. Datum of gage is 511.46 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1963, at datum 1.00 ft higher.

REMARKS.--No regulation. A few small diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--12 years, 25.9 ft<sup>3</sup>/s, 18,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,250 ft<sup>3</sup>/s Feb. 10, 1961, gage height, 7.64 ft, datum then in use, from rating curve extended above 750 ft<sup>3</sup>/s by logarithmic plotting; maximum gage height, 8.24 ft Dec. 21, 1957, datum then in use; no flow for several months each year.

STATISTICAL SUMMARIES

М	NTHLY AN	ID ANNUAL	MEAN DISC	CHARGES	1956-67		м,	AGNITUDE A BASEI		ABILITY O		LOW FLO	OW
	MINIMUM		MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	OF ANNUAL	PERIOD (CON- SECU-		INTERVAL EXCEEDAN	CFS, FOR , IN YEAR CE PROBAB	S, AND A	ANNUAL NO	) <b>N-</b> NT 
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	0.0	18	2.3	5.1	2.22	.7	1						
NOVEMBER	.4	107	26	30	1.14	8.3	3						
DECEMBER	2.6	236	73	71	•97	23.2	7						
JANUARY	6.4	134	67	47	•71	21.5	14						
FEBRUARY	13	154	65	43	•67	20.8	30						
MARCH	5.9	96	48	29	.59	15.3	60						
APRIL	3.1	64	17	17	1.01	5.5	90						
MAY	.5	50	13 _	17	1.31	4.1	120				<del></del>		
JUNE	0.0	7.8	1.3	2.1	1.65	•4	183	.8	•2	.1	0.0		
JULY	0.0	.2	0.0	.1	2.00	0.0							
AUGUST	0.0	0.0	0.0	0.0		0.0	NOTE:	LOW-FLOW	DATA UN	CERTAIN D	UE TO EX	CESSIVE	ZERO
	0.0	5.7	•5	1.7	3.46	•2		EVENTS.					
SEPTEMBER													
ANNUAL		51 PROBABILI				100 	 MA	GNITUDE A					
MAGNIT	TUDE AND BASE	PROBABILI D ON PERI	TY OF INS	STANTANEC CORD 1956 CURRENCE	DUS PEAK 5-67	FLOW	PERIOD	BASED  DISCHA	ON PER	CFS, FOR	CORD 19  INDICAT ARS, AND	956-67 ED RECUR	RENCE
MAGNIT	TUDE AND BASE	PROBABILI D ON PERI FOR INDI	TY OF INS	STANTANEC CORD 1956 CURRENCE	OUS PEAK 5-67 INTERVAL IN PERCE	FLOW		BASED  DISCHA	ON PER	CFS, FOR	CORD 19  INDICAT ARS, AND	956-67 ED RECUR	RENCE
MAGNIT	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INS	STANTANEC CORD 1956 CURRENCE ABILITY,	OUS PEAK 5-67 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASED  DISCHA	ON PER	CFS, FOR AL, IN YE CE PROBAB	CORD 19  INDICAT ARS, AND	956-67 ED RECUR	RENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, ND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU-	BASED DISCHA	ON PER	CFS, FOR AL, IN YE CE PROBAB	CORD 19 INDICAT ARS, AND	ED RECUR ANNUAL N PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, ND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU- TIVE DAYS)	DISCHA	O ON PER  RGE, IN INTERV EXCEEDANC  5 20%	CFS, FOR AL, IN YE CE PROBAB	CORD 19 INDICAT ARS, AND ILITY, 1 25 4%	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%	O ON PER  RRGE, IN INTERV/ EXCEEDANG  5 20%	CFS, FOR AL, IN YE CE PROBAB 10 10%	INDICATARS, ANDILITY, 1	ED RECUR ANNUAL N PERCEN	RRENCE IT
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2 50%  864 570	O ON PER  INTERV EXCEEDANG  5  20%  1240  737	CFS, FOR AL, IN YE PROBAB	INDICATARS, ANDILITY, 1	P56-67  TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  2  50%  864  570  336	0 ON PER NRGE, IN INTERVA EXCEEDANG 5 20% 1240 737 441	100 OF RE CFS, FOR AL, IN YE CE PROBAB 10 10% 1490 816 498	INDICAT ARS, AND ILITY, I	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU- TIVE DAYS) 	BASED  DISCHA  E  2  50%  864  570  336  198	5 20% 1240 737 441 267	100 OF RE  CFS, FOR AL, IN YE  CE PROBAB  10 10 10 490 816 498 312	INDICATARS, ANDILITY, 1	P56-67  TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	BASED  DISCHA  2  50  864  570  336  198  135	0 ON PER INTERVAL EXCEEDANCE 5 20% 1240 737 441 267 180	100 OF RE  CFS, FOR AL, IN YE E PROBAB  10 10%  1490 816 498 312 210	INDICAT ARS, AND ILITY, I	P56-67  TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF REC	STANTANEC CORD 1956 CURRENCE ABILITY,	DUS PEAK 5-67 INTERVAL IN PERCE	FLOW, IN	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASED  DISCHA  2  50%  864  570  336  198  135  94	1240 737 441 267 180	100 OF RE  CFS, FOR AL, IN YE CE PROBAB  10 10%  1490 816 498 312 210 148	INDICAT ARS, AND ILITY, I	P56-67  TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA- 10 10%	STANTANEC CORD 1950 CURRENCE ABILITY, 25 4%	DUS PEAK 5-67 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  2 50%  864 570 336 198 135 94 73	1240 737 441 180 124 96	100 OF RE  CFS, FOR AL, IN YE CE PROBAB  10 10%  1490 816 498 312 210 148 115	INDICAT ARS, AND ILITY, I	P56-67  TED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA- 10 10%	STANTANEC CORD 1950 CURRENCE ABILITY, 25 4%	DUS PEAK 5-67 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASED  DISCHA  2 50%  864 570 336 198 135 94 73	1240 737 441 180 124 96	100 OF RE  CFS, FOR AL, IN YE CE PROBAB  10 10%  1490 816 498 312 210 148 115	INDICAT ARS, AND ILITY, I	P56-67  TED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA- 10 10 2300  DURATION	STANTANEC CORD 1956 CURRENCE BILITY, 25 4%	DUS PEAK 5-67 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%  864  570  336  198  135  94  73  OF RECOR	1240 737 1441 267 180 196	100 OF RE  CFS, FOR AL, IN YE CE PROBAB  10 10%  1490 816 498 312 210 148 115	INDICATARS, ANCILITY, I	P56-67  TED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT

7.2 2.4 .5 0.0

0.0

0.0

0.0

### 14319500 NORTH UMPOUA RIVER AT WINCHESTER, OR

LOCATION.--Lat 43°16'20", long 123°24'40", in NW±NE± sec.33, T.26 S., R.6 W., Douglas County, Hydrologic Unit 17100301, on left bank 400 ft downstream from county bridge, 3.0 mi west of Winchester, and at mile 1.8.

DRAINAGE AREA .-- 1,344 mi2.

PERIOD OF RECORD.--October 1908 to December 1913, October 1923 to September 1929, August 1954 to September 1982. Prior to December 1908, monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 372.97 ft Mational Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Oct. 1, 1908, to Dec. 31, 1913, and Oct. 1, 1923, to Sept. 30, 1929, nonrecording gage at site 4.8 mi upstream at different datums. Aug. 27, 1954, to Aug. 12, 1965, water-stage recorder on right bank at same datum.

REMARKS.--Diurnal fluctuation caused by upstream powerplants; slight regulation by Lemolo Lake and Diamond Lake. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--39 years, 3,730  $ft^3/s$ , 37.69 in/yr, 2,702,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 150,000 ft<sup>3</sup>/s Dec. 22, 1964, gage helght, 34.2 ft, from floodmark; minimum, 383 ft<sup>3</sup>/s Sept. 25, 1960; minimum daily, 578 ft<sup>3</sup>/s Sept. 14, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reach a stage of 23.2 ft, from floodmark, at site 4.8 mi upstream at different datum, discharge, 88,000 ft<sup>3</sup>/s. Flood of Nov. 23, 1953, reach a stage of 28.4 ft, from floodmarks, present site and datum, discharge, 93,300 ft<sup>3</sup>/s.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1909-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1910-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	I CFS, FO ., IN YEA ICE PROBA	RS, AND	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	855	2752	1375	436	.32	3.1	1	739	664	631	606	580	
NOVEMBER	1070	12550	4193	2800	.67	9.3	3	777	694	658	630	603	
DECEMBER	1005	23640	6367	4587	.72	14.2	7	813	723	681	650	618	
JANUARY	1125	15220	6983	3824	.55	15.6	14	840	749	707	675	641	
FEBRUARY	1019	12130	6167	2546	.41	13.7	30	872	776	732	697	661	
MARCH	2245	12880	5555	2476	.45	12.4	60	927	822	772	734	693	
APRIL	1605	7246	4718	1433	.30	10.5	90	984	867	811	766	719	
MAY	1401	7147	3801	1258	•33	8.5	120	1070	934	871	821	768	
JUNE	913	4249	2407	900	.37	5.4	183	1470	1200	1080	982	885	
JULY	717	2824	1336	387	. 29	3.0							
AUGUST	698	1578	1002	196	.20	2.2							
SEPTEMBER	708	1398	984	168	• 17	2.2							
ANNUAL	1639	6116	3729	1021	•27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1909-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1909-82

	•	•			NCE INTER		PERIOD (CON-	DISC	INTER	VAL, ÍN	YEARS, A	ATED RECU ND ANNUAL IN PERCE	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
32100	47900	71600	88400	111000	128000								
							1	38400	57200	68300	81000	89400	
WEIGHTE	D SKEW =	• .016					3	27500	41500	50600	62000	70200	
							7	18800	27800	33800	41400	47200	
							15	13200	18600	22300	26900	30300	
							30	10300	13900	16200	19100	21300	
							60	8190	11100	13000	15400	17200	
							90	7190	9510	11000	12900	14300	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1909-82

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	CEEDED FOR	INDICATED	PERCEN	T OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
11100	7510	6000	5110	4430	3930	3140	2430	1730	1310 1	170	1070	981	891	797

### 14320700 CALAPOOYA CREEK NEAR OAKLAND, OR

LOCATION.--Lat 43°24'10", long 123°21'45", in NW± sec.13, T.25 S., R.6 W., Douglas County, Hydrologic Unit 17100303, near center of span on downstream side of highway bridge, 0.9 mi downstream from Williams Creek, 2.5 mi northwest of Sutherlin, 3.5 mi southwest of Oakland, and at mile 10.1.

DRAINAGE AREA .-- 210 mi2.

PERIOD OF RECORD. -- October 1955 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 371.26 ft National Geodetic, Vertical Datum of 1929. Prior to June 22, 1968, nonrecording gage at same site and datum.

REMARKS.--No regulation. Diversion above station for municipal supply of cities of Sutherlin and Oakland. Small diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--18 years, 495 ft<sup>3</sup>/s, 32.01 in/yr, 358,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft<sup>3</sup>/s Nov. 23, 1961, gage height, 21.55 ft; no flow Sept. 9-11, 1966.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-73 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100
OCTOBER	18	329	76	73	•96	1.3	1						
NOVEMBER	62	1240	510	349	.68	8.6	3						
DECEMBER	108	3856	1243	977	•79	20.9	7	6.4	3.3	2.1	1.4		
JANUARY	120	2296	1261	727	• 58	21.2	14	7.2	4.3	3.1	2.3		
FEBRUARY	290	2229	1004	520	.52	16.9	30	8.4	5.2	3.9	2.9		
MARCH	208	1912	943	508	-54	15.8	60	12	7.2	5.3	4.0		
APRIL	211	1342	478	278	•58	8.0	90	14	9.8	7.8	6.3		
MAY	58	912	288	230	.80	4.8	120	22	15	12	10		
JUNE	25	233	95	53	. 56	1.6	183	58	39	31	26	,	
JULY	9.1	60	27	16	•57	•5							
AUGUST	2.6	29	12	6.7	• 56	•2							
SEPTEMBER	4.3	35	16	8.4	•52	.3							
ANNUAL	250	905	495	146	.29	100							

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	/AL, ÍN '	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE						
	20% 	20%	10%	4 <i>7</i> 5		179	DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100
7810	12500	19300	23800	29500									
							1	8540	12300	14400	16400		-
EIGHTE	D SKEW =	305					3	6170	8550	9720	10800		
							7	4070	5770	6790	7960		
							15	2730	3800	4440	5200		
							30	2010	2680	3090	3580		
							60	1570	2080	2400	2800		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-73

90

1330 1710 1930

2190

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TH	ME		
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85 <b>%</b>	90%	95%
2090	1330	952	706	542	424	267	150	79	40	28	20	15	11	7.1

189

### 14321000 UMPQUA RIVER NEAR ELKTON, OR

LOCATION.--Lat 43°35'10", long 123°33'15", in NW½ sec.8, T.23 S., R.7 W., Douglas County, Hydrologic Unit 17100303, on left bank 3.5 mi south of Elkton, 8.3 mi upstream from Elk Creek, and at mile 56.9.

DRAINAGE AREA .-- 3,683 mi2.

PERIOD OF RECORD. -- October 1905 to September 1982.

25000 17600 13700 11100

9270

7860

5720

4000

2490

1580

1410

1270

1160

1060

936

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 90.42 ft National Geodetic Vertical Datum of 1929. Prior to June 29, 1972, at site 2,400 ft downstream at same datum. See WSP 1931 or 2135 for history of changes prior to June 29, 1972.

REMARKS.--Regulation by powerplants on North Umpqua River ordinarily does not affect discharge at this station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--77 years, 7,480 ft<sup>3</sup>/s, 27.58 in/yr, 5,419,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.---Maximum discharge, 265,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 51.95 ft, from floodmarks, minimum observed, 640 ft<sup>3</sup>/s July 18, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least Dacember 1861, that of Dec. 23, 1964.

	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	FOR INDICEARS, AND BABILITY,	ANNUAL	NON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>≴</b>	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL JULY JUNE JULY AUGUST SEPTEMBER	857 832 1238 1440 1365 3462 2432 1934 1053 742 703 740	14200 29500 51220 34900 32800 27100 20480 15800 9526 5063 1867 3475	1914 7042 13390 16300 15150 12360 9633 6516 3767 1740 1173 1188	1701 5653 9648 8854 6710 5563 4012 2901 1841 733 238 339	.89 .80 .72 .54 .44 .45 .42 .45 .49 .42 .20	2.1 7.8 14.8 18.1 16.8 13.7 10.7 7.2 4.2 1.9 1.3	1 3 7 14 30 60 90 120 183	964 978 994 1010 1040 1100 1170 1280 2030	839 850 863 876 899 946 996 1070	776 786 797 810 829 870 910 970 1320	727 735 745 757 773 809 841 893 1160	674 679 687 700 713 743 767 814 1000	639 643 650 663 675 701 720 764 907
					.30 OUS PEAK	100  FLOW	 MA				OF ANNU		
OISCHARGE, YEARS, A	TUDE AND BASE	PROBABILI D ON PERIO	TY OF IN OD OF RE	STANTANE CORD 190	OUS PEAK	FLOW	 PERIOD (CON-	BAS	ED ON PE  HARGE, I INTER	RIOD OF  N CFS, F VAL, IN	OF ANNU RECORD  OR INDIC YEARS, A	1906-82 ATED REC	URRENCE
MAGNIT	TUDE AND BASE	PROBABILI D ON PERIO	TY OF IN OD OF RE	STANTANE CORD 190	OUS PEAK 6-82 INTERVAL IN PERCE	FLOW	PERIOD	BAS	ED ON PE  HARGE, I INTER	RIOD OF  N CFS, F VAL, IN	RECORD OR INDIC YEARS, A	1906-82 ATED REC	URRENCE
MAGNITODI SCHARGE, YEARS, /	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI' D ON PERIO FOR INDI- L EXCEEDA  5 20\$ 40000 17:	TY OF INDO OF RE	STANTANE CORD 190 CURRENCE ABILITY, 25 4%	OUS PEAK 6-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT  100 1%	PERIOD (CON- SECU- TIVE	BAS DISC 2 50\$ 82200 62600 45100 31900 24400 19300 16800	HARGE, I INTER EXCEEDA 5 20\$	N CFS, F VAL, IN NCE PROE 10 10\$ 146000 110000 74500 36700 29000 25200	RECORD  OR INDIC YEARS, A BABILITY, 25	1906-82  ATED REC ND ANNUA IN PERC	URRENCE L ENT
MAGNITODI SCHARGE, YEARS, /	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI' D ON PERIO FOR INDIA L EXCEEDA  5 20\$ 40000 17:029	TY OF IN OD OF RE	STANTANE CORD 190 CURRENCE ABILITY, 25 4% 3000 24	OUS PEAK 6-82 INTERVAL IN PERCE 50 2% 4000 276	FLOW  , IN NT 100 1% 000	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	BAS  DISC  2 50\$  82200 62600 45100 31900 24400 19300 0F REC	HARGE, I INTER EXCEEDA 5 20%	N CFS, F VAL, IN NCE PROB 10 10 10 10 10 10 10 10 10 10 10 10 10	RECORD  OR INDIC YEARS, A ABBILITY,  25 4\$  174000 131000 86900 41300 32700 28600	1906-82  ATED REC ND ANNUA IN PERC 50 2\$  194000 145000 95300 61600 44200 35100	212000 159000 103000 65800 37200

### 14322000 ELK CREEK NEAR DRAIN. OR

LOCATION.--Lat 43°38'30", long 123°17'50", in NE\subsets SW\subsets sec.21, T.22 S., R.5 W., Douglas County, Hydrologic Unit 17100303, on right bank at downstream side of highway bridge, 0.2 mi downstream from Yoncalla Creek, 1.7 mi southeast of Drain, and at mile 26.2.

DRAINAGE AREA .-- 104 mi2.

1010

580

393

270 204

157 85

PERIOD OF RECORD. -- October 1955 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 305.96 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Small diversions by pumping for irrigation above station. Municipal supply for town of Yoncalla is diverted from Wilson Creek above station.

AVERAGE DISCHARGE.--18 years, 222  $ft^3/s$ , 29.90 in/yr, 165,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,000  $ft^3/s$  Feb. 10, 1961, gage height, 23.7 ft, from floodmark, from rating curve extended above 7,500  $ft^3/s$ ; no flow at times.

### STATISTICAL SUMMARIES

	MINIMA	MAVIMIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	1	NTERVAL,	IN YEA	OR INDICAT ARS, AND A ABILITY, I	NNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.5	99	21	24	1.11	.8	1	.2	0.0	0.0	0.0		
IOVEMBER	8.6	611	217	177	.82	8.1	3	.3	.1	0.0	0.0		
ECEMBER	33	1869	582	476	.82	21.8	7	. 5	.2	.1	0.0		
ANUARY	67	1212	619	377	.61	23.2	14	.7	.3	.2			
EBRUARY	126	1375	498	325	.65	18.6	30	1.3	•6	.3			
MARCH	83	807	408	236	.58	15.3	60	2.0	1.0	.7			
NPRIL	63	649	182	142	.78	6.8	90	3.0	1.7	1.3			
MAY	19		102	91	.89	3.8	120	5.2	3.2	2.4			
		361											
IUNE	6.7	63	30	15	.51	1.1	183	16	9.7	7.4	6.0		
JULY	.9	18	7.2	5.3	.74	•3							
AUGUST	.1	12	2.4	2.7	1.12	•1							
SEPTEMBER	.9	10	3.5	2.7	.76	.1							
NNUAL	106	404	222	69	.31	100							
	UDE AND	PROBABILI D ON PERI	TY OF INS	TANTANE	DUS PEAK I		 MAC				OF ANNUAL		
MAGNIT	TUDE AND BASE	PROBABILI	TY OF INS	STANTANE CORD 1956	DUS PEAK 15-73	FLOW	MAC	BASED DISCHA	ON PERI	OD OF F CFS, FO L, IN Y		56-73 ED RECUR	RRENCE
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANECORD 1956 CURRENCE WILLITY,	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU-	BASED DISCHA E	ON PERI	OD OF F CFS, FO L, IN Y E PROBA	RECORD 19 OR INDICAT (EARS, AND OBILITY, I	56-73 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT ISCHARGE, YEARS, A	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF INS	STANTANEI CORD 1956 CURRENCE	DUS PEAK ( 5-73 INTERVAL, IN PERCE	FLOW , IN	PERIOD (CON- SECU- TIVE	BASED DISCHA E	ON PERI RGE, IN INTERVA XCEEDANC	OD OF F	RECORD 19 OR INDICAT (EARS, AND ABILITY, I	56-73 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANECORD 1956 CURRENCE WILLITY,	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU-	BASED DISCHA E	ON PERI	OD OF F CFS, FO L, IN Y E PROBA	RECORD 19 OR INDICAT (EARS, AND OBILITY, I	56-73 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANECORD 1956 CURRENCE WILLITY,	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF F CFS, FO L, IN Y E PROBA	RECORD 19 OR INDICAT PEARS, AND ABILITY, 1 25 44	56-73 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEI CORD 1956 CURRENCE (BILITY, 25 4%	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF F CFS, FO L, IN Y E PROBA 10 10%	RECORD 19 OR INDICAT FEARS, AND BILLITY, I 25 4%	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEI CORD 1956 CURRENCE (BILITY, 25 4%	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  4630 3250	ON PERI RGE, IN I INTERVAL XCEEDANC 5 20% 7100 4820	OD OF F CFS, FO L, IN Y E PROBA 10% 8620 5730	DR INDICAT (EARS, AND BILITY, I 25 4%	56-73 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEI CORD 1956 CURRENCE (BILITY, 25 4%	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF F CFS, FO L, IN Y E PROBA 10 10%	RECORD 19 OR INDICAT FEARS, AND BILLITY, I 25 4%	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEI CORD 1956 CURRENCE (BILITY, 25 4%	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  4630 3250	ON PERI RGE, IN I INTERVAL XCEEDANC 5 20% 7100 4820	OD OF F CFS, FO L, IN Y E PROBA 10% 8620 5730	DR INDICAT (EARS, AND BILITY, I 25 4%	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEI CORD 1956 CURRENCE (BILITY, 25 4%	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  E 2 50%  4630 3250 2170	ON PERI  RGE, IN I  INTERVAL  5 20%  7100 4820 3160	OD OF F CFS, FC L, IN Y E PROBA 10 10\$ 8620 5730 3760	RECORD 19 RRINDICAT FEARS, AND BILITY, I 25 4% 10400 6710 4440	56-73 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEI CORD 1956 CURRENCE (BILITY, 25 4%	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  E 2 50%  4630 3250 2170 1410	ON PERI RGE, IN INTERVAL XCEEDANCE 5 20% 7100 4820 3160 2000	OD OF F CFS, FC L, IN Y E PROBA 10 10\$ 8620 5730 3760 2370	DR INDICAT (FARS, AND (BILITY, 1) 25 4% 10400 6710 4440 2790	56-73 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEI CORD 1956 CURRENCE (BILITY, 25 4%	DUS PEAK 1 5-73 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  4630 3250 2170 1410 996	ON PERI RGE, IN I INTERVA XCEEDANC  5 20%  7100 4820 3160 2000 1360	OD OF F CFS, FC L, IN Y E PROBA 10 10\$ 8620 5730 3760 2370 1590	RECORD 19  OR INDICAT (EARS, AND IBILITY, I  25 4\$  10400 6710 4440 2790 1870	50-73 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA	STANTANEI CORD 1950 SURRENCE BILITY, 25 4%	DUS PEAK 15-73 INTERVAL IN PERCEI	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  4630 3250 2170 1410 996 762 628	ON PERI RGE, IN 1 INTERVA XCEEDANC  5 20%  7100 4820 3160 2000 1360 1020 829	0D OF F CFS, FC L, IN Y E PROBA 10 10% 5730 3760 2370 1590 1190 953	RECORD 19 REINDICAT (EARS, AND BILITY, I  25 4%  10400 6710 4440 2790 1870 1390	50-73 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA  10 10%  3700 17	STANTANEICORD 1950 CURRENCE BILLITY, 25 4%	DUS PEAK 15-73  INTERVAL 1N PERCEI  50 2%	FLOW  , IN  NT  100  1%  —————————————————————————————	PERIOD (CON- SECU- TIVE DAYS) 	BASED  DISCHA  E  2 50%  4630 3250 2170 1410 996 762 628  OF RECOR	ON PERI RGE, IN 1 INTERVA XCEEDANC  5 20%  7100 4820 2000 1360 1020 829 D 1956-7:	OD OF F  CFS, FC L, IN Y E PROBA  10 10 5730 3760 2370 1590 1190 953	DR INDICAT (FARS, AND (BILITY, 1) 25 4% 10400 6710 4440 2790 1870 1390 1100	50-73 ED RECUF ANNUAL N PERCEN 50 2%	RRENCI

52

26

6.9 4.7 3.1 1.8

## TENMILE CREEK BASIN 191

# 14323200 TENMILE CREEK NEAR LAKESIDE, OR

LOCATION.--Lat 43°34'40", long 124°11'30", near center of sec.13, T.23 S., R.13 W., Coos County, Hydrologic Unit 17100304, in Siuslaw National Forest, near left bank on downstream side of highway bridge, 200 ft upstream from Eel Creek, 0.8 mi upstream from Saunders Creek, and 1.0 mi west of Lakeside. Records include flow of Eel and Saunders Creeks.

DRAINAGE AREA. -- About 87 mi<sup>2</sup> at measuring section 1.2 mi downstream.

PERIOD OF RECORD. -- August 1957 to September 1976.

1240

915

716

590

490

409

277

153

87

47

24

34

17

13

9.4

GAGE.--Water-stage recorder. Auxiliary nonrecording gage 1.4 mi upstream from base gage, read twice daily. Datum of both gages is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow affected by natural storage in Tenmile Lake and other lakes tributary to Eel and Saunders Creeks. No diversion above station. Records given herein are for measuring site.

AVERAGE OISCHARGE.--19 years (water years 1958-76), 338 ft3/s, 244,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,330 ft<sup>3</sup>/s Dec. 26, 1964, elevation 16.46 ft at base gage, 18.78 ft at auxiliary gage; minimum, 2.0 ft<sup>3</sup>/s Aug. 29, Sept. 2, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known stage at auxiliary gage, 19.83 ft in January 1953, from floodmarks.

М	ONTHLY AN	O ANNUAL	MEAN DIS	SCHARGES	1958-76				D ON PERI			. LOW FLO 59-76	
	M. M. M.	MAVIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-		INTERVAL,	. IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.6	177	45	46	1.02	1.1	1	8.0	4.6	3.3	2.5		
NOVEMBER	50	1159	312	280	•90	7.7	3	8.2	4.6	3.4	2.6		
DECEMBER	161	1503	724	376	.52	17.8	7	8.5	4.9	3.6	2.8		
JANUARY	178	1393	875	377	.43	21.5	14	9.1	5.2	3.9	3.0		
FEBRUARY	270	1325	738	268	•36	18.1	30	11	6.5	4.8	3.8		
MARCH	246	1149	603	264	.44	14.8	60	13	8.0	6.4	5.3		
APRIL	191	958	401	197	.49	9.8	90	16	10	8.1	6.8		
MAY	91	511	212	109	.51	5.2	120	22	15	12	9.7		
JUNE	41	219	90	40	.44	2.2	183	53	36	30	25		
JULY	20	85	40	17	-42	1.0							
AUGUST	5.3	42	20	9.1	.47	• 5							
SEPTEMBER	4.3	78	18	18	•98	•5							
ANNUAL	189	568	338	80	.24	100							
	TUDE AND	PROBABILI	TY OF IN	ISTANTANE	OUS PEAK		 MA				OF ANNUAL		
MAGNI DISCHARGE	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE	ISTANTANE CORD 195	OUS PEAK 8-76	FLOW 	PERIOD	BASE DISCH	O ON PERI ARGE, IN INTERVA	OD OF RECEIVED	ECORD 19	58-76  ED RECUF ANNUAL	RRENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 195 CURRENCE BABILITY,	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU-	BASE DISCH	D ON PERI ARGE, IN INTERVA	OD OF RECEIVED	R INDICATI EARS, AND	58-76 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 195 CURRENCE BABILITY,	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON- SECU- TIVE	BASE DISCH	O ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF RECEPTOR	ECORD 19: R INDICATI EARS, AND BILITY, II	58-76 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU-	BASE DISCH	D ON PERI ARGE, IN INTERVA	OD OF RECEIVED	R INDICATI EARS, AND	58-76 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 195 CURRENCE BABILITY,	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF RE	ECORD 19. R INDICAT: EARS, AND BILITY, II  25 4%	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH.	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF RECEPTOR	R INDICATI EARS, AND BILITY, II 25 4%	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH.	ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF RECEPTION OF THE PROBAE	R INDICATI EARS, AND BILITY, II 25 4%	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  2210 2120 1870	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20% 2830 2710 2380	OD OF RECEIVED OF	R INDICATI EARS, AND BILITY, II 25 4% 3450 3310 2930	58-76  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  2210 2120 1870 1480	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20% 2830 2710 2380 1870	OD OF RE	R INDICATI EARS, AND BILITY, II 25 4% 3450 3310 2930 2310	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASE DISCH. 2 50% 2210 2120 1870 1480 1150	2830 2710 2380 1870 1420	OD OF RECEIVED OF	R INDICATI EARS, AND BILITY, II 25 4% 3450 3310 2930 2310 1760	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 195 CURRENCE ABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE	FLOW , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  2210 2120 1870 1480	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20% 2830 2710 2380 1870	OD OF RE	R INDICATI EARS, AND BILITY, II 25 4% 3450 3310 2930 2310	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE ICORD 195 CURRENCE BABILITY, 25 4%	OUS PEAK 8-76 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH.  2 50%  2210 2120 1870 1150 954 841	2830 2710 2380 1420 1190 1050	OD OF RECEIVED OF	R INDICATI EARS, AND BILITY, II 25 4% 3450 3310 2930 2310 1760 1490	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20% 2910	TY OF IN OD OF RE	ISTANTANE ICORD 195 ICCURRENCE SABILITY, 25 4% 3730	OUS PEAK 8-76  INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH.  2 50%  2210 2120 1870 1480 1150 954 841 OF RECOR	2830 2710 2380 1420 1190 1050 27 10958-7	OD OF RECEIVED OF	R INDICATI EARS, AND BILITY, II 25 4% 3450 3310 2930 2310 1760 1490 1300	58-76 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE

192 COOS RIVER BASIN

### 14324500 WEST FORK MILLICOMA RIVER NEAR ALLEGANY, OR

LOCATION.--Lat 43°28'35", long 124°03'20", in SW±NW± sec.19, T.24 S., R.11 W., Coos County, Hydrologic Unit 17100304, on left bank at highway bridge, 40 ft upstream from Daggett Creek, 3.8 mi north of Allegany, and at mile 6.82.

DRAINAGE AREA.--46.9 mi2, at cableway 300 ft downstream.

PERIOD OF RECORD. -- September 1954 to September 1981.

1060

669

478

355

269

212

134

82

GAGE.--Water-stage recorder. Datum of gage is 76.95 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Only minor diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years (water years 1955-81),  $249 \text{ ft}^3/\text{s}$ , 72.10 In/yr, 180,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft<sup>3</sup>/s Nov. 24, 1960, gage height, 15.86 ft; minimum, 1.8 ft<sup>3</sup>/s Sept. 5, 9, 1965, Sept. 8-10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January or November 1953 reached a stage of about 17.9 ft, from information by local resident. Flood in December 1981 reached a stage of 15.45 ft.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1955-81 MAG

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1956-81

13

8.8

6.4

	Mississing	****	UEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	1	NTERVAL,	IN YEA	RS, AND	TED RECUR ANNUAL NO IN PERCEN	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CF\$)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
CTOBER	4.2	290	80	75	.94	2.7	1	3.6	2.4	2.0	1.7	1.5	
NOVEMBER	40	1065	369	252	.68	12.3	3	3.6	2.5	2.1	1.8	1.5	
DECEMBER	34	1357	630	331	.53	21.0	7	3.9	2.7	2.2			
IANUARY	53	1066	581	319	• 55	19.4	14	4.1	2.9	2.4	2.1		
EBRUARY	137	1152	485	237	. 49	16.2	30	4.9	3.4	2.9	2.5		
MARCH	117	809	417	192	.46	13.9	60	6.6	4.4	3.6	3.1		
PRIL	83	571	239	125	.52	8.0	90	8.9	5.8	4.9	4.3		
AY	27	358	111	78	•70	3.7	120	12	8.3	7.0	6.1		
UNE	16	146	44	<b>2</b> 9	.65	1.5	183	35	23	18	15	12	
IULY	7.6	36	15	7.0		•5							
UGUST	3.4	57	9.9		1.04	•3							
EPTEMBER	2.5	98	21	24	1.17	.7							
NNUAL	84	385	249	63	.25	100							
	BASE	D ON PERIO	OD OF RE	CORD 195	OUS PEAK F 5-81 		MA(	BASED	ON PERI	OD OF R	ECORD 19	L HIGH FL 955-81  TED RECUR	
I SCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD 195	5-81 INTERVAL, IN PERCEN	, IN	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF RI	ECORD 19	95 <b>5-</b> 81	 RENCE
I SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 195	5-81 INTERVAL, IN PERCEN	, IN VT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RI	ECORD 19	955-81  TED RECUR D ANNUAL	T 100
I SCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2	FOR INDIC	CATED RENCE PROB	CORD 195	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	OON PERI	OD OF RI	R INDICA EARS, AND BILITY, 25 4%	955-81 TED RECUR D ANNUAL IN PERCEN 50 2%	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAD	CATED RENCE PROB	CORD 195	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF RI	R INDICA R INDICA EARS, ANI BILITY, 25 4%	955-81 TED RECUR D ANNUAL IN PERCEN 50 2%	T 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAD	CATED RENCE PROB	CORD 195	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  3680 2770	ON PERI	OD OF RI CFS, FOF L, IN YI E PROBAB 10% 5630 4100	R INDICA R INDICA EARS, ANI BILITY, 25 4%	955-81  TED RECUR D ANNUAL IN PERCEN 50 2% 6820 4930	T 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAD	CATED RENCE PROB	CORD 195	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  E 2 50%  3680 2770 1910	ON PERI 	OD OF RI CFS, FOF L, IN YI E PROBAR 10 10% 5630 4100 2820	R INDICA R INDICA REARS, ANI BILITY, 25 4% 6360 4600 3200	955-81  TED RECUR D ANNUAL IN PERCEN  50 2%  6820 4930 3450	 RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAD	CATED RENCE PROB	CORD 195	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  3680 2770 1910 1260	ON PERI 	OD OF RI  CFS, FOF L, IN YI E PROBAB  10 10 5630 4100 2820 1820	R INDICA: EARS, ANI BILITY,  25  4%  6360 4600 3200 2080	955-81  TED RECUR D ANNUAL IN PERCEN  50 25  6820 4930 3450 2270	T 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAD	CATED RENCE PROB	CORD 195	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED DISCHA  E 2 50%  3680 2770 1910 1260 942	O ON PERI IRGE, IN INTERVA XCEEDANC 5 20% 4940 3630 2490 1610 1170	OD OF RI	R INDICA: R INDICA: REARS, ANI BILITY, 25 4 4 6360 4600 3200 2080 1470	955-81  TED RECUR D ANNUAL IN PERCEN  50 2%  6820 4930 3450 2270 1580	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAD	CATED RENCE PROB	CORD 195	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  3680 2770 1910 1260	ON PERI 	OD OF RI  CFS, FOF L, IN YI E PROBAB  10 10 5630 4100 2820 1820	R INDICA: EARS, ANI BILITY,  25  4%  6360 4600 3200 2080	955-81  TED RECUR D ANNUAL IN PERCEN  50 25  6820 4930 3450 2270	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RE- CATED RE- NCE PROB 10 10 10 10 DURATIO	CURRENCE ABILITY,  25 4%  9600 1	INTERVAL, IN PERCEN 50 1 2% 0400	IN NT OO 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	BASED  DISCHA  E 2 50%  3680 2770 1910 1260 942 731 645  OF RECOR	RGE, IN INTERVA XCEEDANC 5 20%	OD OF RI  CFS, FOR L, IN YI E PROBAE  10 10/5 5630 4100 2820 1820 1310 1060 889	R INDICA: EARS, ANIBILITY,  25 45  6360 4600 3200 2080 1470 971	955-81  TED RECUR D ANNUAL IN PERCEN  50 2\$  6820 4930 3450 2270 1580 1300	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RE- CATED RE- NCE PROB 10 10 10 10 DURATIO	CURRENCE ABILITY,  25 4%  9600 1	INTERVAL, IN PERCEN 50 1 2% 0400	IN NT OO 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	BASED  DISCHA  E 2 50%  3680 2770 1910 1260 942 731 645  OF RECOR	RGE, IN INTERVA XCEEDANC 5 20%	OD OF RI  CFS, FOR L, IN YI E PROBAE  10 10/5 5630 4100 2820 1820 1310 1060 889	R INDICA: EARS, ANIBILITY,  25 45  6360 4600 3200 2080 1470 971	955-81  TED RECUR D ANNUAL IN PERCEN  50 2\$  6820 4930 3450 2270 1580 1300	RENCE

## 14324600 SOUTH FORK COQUILLE RIVER ABOVE PANTHER CREEK, NEAR ILLAHE, OR

LOCATION.--Lat 42°45'30", long 123°59'10", in SE‡ sec.28, T.32 S., R.11 W., Coos County, Hydrologic Unit 17100304, on left bank 0.7 mi upstream from Panther Creek, 10.0 mi northeast of Illahe, and at mile 88.5.

DRAINAGE AREA. -- 31.2 mi<sup>2</sup>.

567

366

269

208

163

129

80

43

23

7.1

5.1

3.7

2.6

1.9

PERIOD OF RECORD. -- October 1956 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 2,117.30 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE. -- 14 years, 144 ft<sup>3</sup>/s, 62.68 in/yr, 104,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,840 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.07 ft, from floodmarks, from rating curve extended above 1,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 12.75 ft; minimum, 0.94 ft<sup>3</sup>/s Sept. 28, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of about 15.7 ft, discharge, about 6,300 ft<sup>3</sup>/s.

М	ONTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1957-70			BASE	ON PERI	OD OF R	ECORD 19	58-70	
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	INTERVAL,	IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	0N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER	2.5 13 45 48 163 78 57 20 7.8 5.2 1.7	162 270 846 740 734 470 381 275 40 12 6.3 8.7	34 150 303 359 335 267 161 90 21 7.6 3.4	44 92 221 226 163 112 84 74 8.3 2.4 1.4	1.31 .61 .73 .63 .49 .42 .52 .82 .39 .32 .40	1.9 8.6 17.5 20.7 19.3 15.4 9.3 5.2 1.2	1 3 7 14 30 60 90 120 183	1.5 1.6 1.7 2.0 2.7 3.7 5.6	1.2 1.2 1.4 1.4 1.6 2.1 3.0 4.3	1.1 1.2 1.3 1.3 1.5 1.9 2.6 3.7 8.0	1.1 1.1 1.2 1.3 1.5 1.8 2.4 3.3 6.7	     	
NNUAL	109 TUDE AND	185  PROBABILI D ON PERI				100 	 MAG				DF ANNUAL ECORD 19		
MAGNI	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INSOD OF REC	STANTANEC CORD 1957 CURRENCE ABILITY,	OUS PEAK F 7-70 INTERVAL, IN PERCEN	FLOW	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RECEIVED	_	57-70 ED RECUI	RRENCE
MAGNI	TUDE AND BASE	PROBABILI D ON PERI FOR INDI	TY OF INS	STANTANEC CORD 1957 CURRENCE	OUS PEAK F 7-70 INTERVAL, IN PERCEN	FLOW	PERI <b>0</b> D	BASED DISCHA	ON PERI	OD OF RECEIVED	CORD 199	57-70 ED RECUI	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INSOD OF REC	STANTANEC CORD 1957 CURRENCE ABILITY,	DUS PEAK F 7-70 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE	BASEC DISCHA E	RGE, IN INTERVA XCEEDANC	OD OF RECEIVED	CORD 199 R INDICATE EARS, AND BILITY, IF	57-70 ED RECUI ANNUAL N PERCEN	RRENCE
MAGNI	109 FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA	STANTANEC CORD 1957 CURRENCE ABILITY, 25 4%	DUS PEAK F 1-70 INTERVAL IN PERCEN	IN NT 1000 115	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCHA  E 2 50%  2350 1760 1220 812 581 445 375	RGE, IN INTERVA XCEEDANC 5 20%	OD OF RECOMPTION	25 4% 5210 3830 2470 1370 908 702	57-70 ED RECUI ANNUAL N PERCEN 50 2%	RRENCE
MAGNI  DISCHARGE YEARS,  1.25 80%  2820	109 FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA	CURRENCE ABILITY, 25 44 5720	DUS PEAK F7-70 INTERVAL, IN PERCEN 50 12%	IN IN IT IT IT IT IT IT IT IT IT IT IT IT IT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  2350 1760 1220 812 581 445 375  OF RECOR	3100 2370 1650 1030 706 545 456	OD OF RECEIVED OF	25 4 5 210 3830 2470 1370 908 702 575	57-70 ED RECUI ANNUAL N PERCEN 50 2%	RRENCE

### 14324700 SOUTH FORK COQUILLE RIVER NEAR ILLAHE, OR

LOCATION.--Lat 42°43'30", long 124°00'40", in NW½ sec.16, T.33 S., R.11 W., Coos County, Hydrologic Unit 17100305, in Siskiyou National Forest, on left bank 1.0 mi downstream from Lockhart Creek, 7.0 mi north of Illahe, and at mile 85.1.

DRAINAGE AREA.--40.6 mi<sup>2</sup>, at measuring site 1.2 mi upstream from gage.

PERIOD OF RECORD. -- October 1956 to September 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,871.04 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--No regulation or diversion above station. Records given herein are for measuring site.

AVERAGE DISCHARGE.--18 years, 199 ft3/s, 66.56 in/yr, 144,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.80 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 9.54 ft; minimum, 1.2 ft<sup>3</sup>/s Sept. 27-29, 1967, Sept. 28-30, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD, -- Flood of Dec. 21, 1955, reached a stage of about 10.8 ft, discharge, about 8,600 ft<sup>3</sup>/s.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-74 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-74

	MINIM	MAY (MIN	мсти	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
MONTH	MINIMUM (CFS)	MAX1MUM (CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	3.5	204	38	50	1.30	1.6	1	2.1	1.6	1.5	1.4		
NOVEMBER	15	951	255	215	.84	10.6	3	2.1	1.7	1.5	1.4		
DECEMBER	55	1164	438	277	.63	18.2	7	2.3	1.8	1.6	1.5		
JANUARY	72	992	498	271	- 54	20.7	14	2.5	1.9	1.7	1.6		
FEBRUARY	181	997	413	215	•52	17.2	30	2.8	2.3	2.0	1.9		
MARCH	95	708	377	154	.41	15.7	60	3.8	3.0	2.7	2.5		
APRIL	73	480	226	110	.49	9.4	90	5.1	4.0	3.5	3.2		
MAY	25	364	109	92	•85	4.5	120	7.3	5.5	4.8	4.2		
JUNE	10	54	27	11	.42	1.1	183	20	13	11	9.1		
JULY	5.7	16	10	3.2	•32	. 4							
AUGUST	2.6	8.1	4.7	1.7	.35	.2							
SEPTEMBER	1.7	12	5.3	3.1	• 59	•2							
ANNUAL	133	308	199	43	•22	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1957-74

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1957-74

ISCHARGE, YEARS, AN				RECURRENC ROBABILITY			PERIOD (CON-	DISCH	INTERV	/AL, ÍN Y	OR INDICAT EARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
3750	4870	6440	7510	8890									
							1	3260	4540	5580	7120		
WEIGHTED	SKEW =	.244					3	2430	3340	4050	5100		
							7	1670	2210	2600	3130		
							15	1090	1360	1530	1740		
							30	775	947	1060	1210		
							60	607	749	842	958		
							90	508	626	704	802		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-74

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
861	515	366	287	226	180	107	57	30	14	9.3	7.0	5.2	3.8	2.8

195

## 14324900 SOUTH FORK COQUILLE RIVER NEAR POWERS, OR

LOCATION.--Lat 42°47'05", long 124°02'25", in SW\u00e4SW\u00e4 sec.18, T.32 S., R.11 W., Coos County, Hydrologic Unit 17100305, Siskiyou National Forest, on right bank 0.8 mi upstream from Hall Creek, 7.0 mi southeast of Powers, and at mile 76.1.

DRAINAGE AREA. -- 93.2 mi2.

PERIOD OF RECORD. -- October 1956 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 585.32 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 514 ft3/s, 74.89 in/yr, 372,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,600 ft³/s Dec. 22, 1964, gage height, 23.00 ft, from floodmarks, from rating curve extended above 9,300 ft³/s on basis of slope-area measurement of peak flow; minimum, 6.5 ft³/s Oct. 3-5, 1960.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-70 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-70

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN INTERVAL, EXCEEDANC	IN YEARS	, AND AN	NUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	19	585	150	159	1.06	2.4	1	13	9.7	8.2	7.2		
NOVEMBER	60	1181	611	342	• 56	9.8	3	13	9.9	8.5	7.4		
DECEMBER	192	3246	1115	819	.73	18.0	7	13	10	8.9	7.9		
JANUARY	206	2695	1260	786	.62	20.3	14	14	11	9.3	8.3		
FEBRUARY	517	2560	1172	595	.51	18.9	30	15	12	11	10		
MARCH	217	1711	898	410	. 46	14.5	60	17	15	14	14		
APRIL	201	1294	522	280	.54	8.4	90	22	18	17	16		
MAY	76	901	316	243	•77	5.1	120	30	24	22	20		
JUNE	36	152	83	29	.35	1.3	183	71	48	39	33		
JULY	26	53	36	7.9	.22	.6							
AUGUST	12	42	21	7.5	.36	.3							
SEPTEMBER	11	43	23	10	.44	.4							
ANNUAL	420	675	514	77	. 15	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1957-70 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1957-70

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, ÍN	OR INDICAT YEARS, AND ABILITY.	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
9850	12700	16700	19300	22800									
							1	7900	10900	14100	20000		
WEIGHTE	D SKEW =	<b>• .227</b>					3	5960	8060	10200	13900		
							7	4240	5800	7080	9010		
							15	2870	3740	4350	5180		
							30	2030	2520	2890	3400		
							60	1560	1950	2230	2610		
							90	1320	1620	1830	2090		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-70

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCEE	ED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2150	1290	916	706	560	447	285	164	94	50	36	<b>2</b> 9	22	18	15

# 14325000 SOUTH FORK COQUILLE RIVER AT POWERS, OR

LOCATION.--Lat 42°53'30", long 124°04'10", in SEt sec.12, T.31 S., R.12 W., Coos County, Hydrologic Unit 17100305, on left bank 0.6 mi downstream from highway bridge at Powers, 0.9 mi upstream from Woodward Creek, and at mile 64.5.

DRAINAGE AREA .-- 169 mi2.

PERIOD OF RECORD. -- September 1916 to September 1926. December 1928 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 197.42 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1938, nonrecording gage at various sites within 1 mi of present site at different datums.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--63 years (water years 1917-26, 1930-82), 789 ft<sup>3</sup>/s, 63.40 in/yr, 571,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 26.51 ft, from floodmarks, from rating curve extended above 19,000 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 18.14 ft and slope-area measurement of peak flow; minimum, 12 ft<sup>3</sup>/s Sept. 22-25, 27-30, 1939, Oct. 5, 1961, Oct. 16-20, 1974.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1917-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		BASED ON PERIOD OF RECORD 1918-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	⊃N <b>-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10≴	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	16	1945	220	338	1.54	2.3	1	19	15	14	13	11	11
NOVEMBER	16	4232	1018	847	.83	10.7	3	19	15	14	13	12	11
DECEMBER	44	5361	1739	1078	.62	18.3	7	20	16	14	13	12	11
JANUARY	97	4244	1843	1053	.57	19.4	14	21	17	15	14	13	12
FEBRUARY	209	4151	1639	795	.49	17.3	30	23	18	17	15	14	14
MARCH	330	3818	1322	666	•50	13.9	<b>~</b> 60	27	21	19	17	16	15
APRIL	216	2451	943	525	.56	9.9	90	32	25	22	20	18	17
MAY	78	1568	456	345	•76	4.8	120	43	31	27	24	21	20
JUNE	51	699	162	113	.70	1.7	183	105	68	53	44	35	30
JULY	28	186	61	28	.46	.6							
AUGUST	17	101	34	13	• 39	.4							
SEPTEMBER	16	385	46	54	1.20	•5							
ANNUAL	237	1374	789	238	.30	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1917-82

### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1917-82

	, IN CFS AND ANNU						PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICA YEARS, AI ABILITY.	ND ANNUA	L
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1 <b>%</b> 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
10400	15200	22000	26600	32400	36800	41100							
							1	11100	15700	19000	23200	26400	29800
WEIGHTE	D SKEW =	100					3	7970	11600	14200	17700	20500	23500
							7	5630	7960	9560	11600	13200	14900
							15	3960	5350	6250	7360	8170	8970
							30	2930	3870	4440	5100	5560	5990
							60	2280	3000	3410	3880	4200	4500
							90	1980	2580	2930	3320	3580	3820

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1917-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10≴	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75 <b>%</b>	80%	85 <b>%</b>	90%	95%
3250	2050	1480	1160	928	745	465	260	134	67	50	40	32	27	21

## 14326500 MIDDLE FORK COQUILLE RIVER NEAR MYRTLE POINT, OR

LOCATION.--Lat 43°01'30", long 124°05'20", in NW\sEt sec.26, T.29 S., R.12 W., Coos County, Hydrologic Unit 17100305, 0.3 mi downstream from Indian Creek, 2 mi upstream from South Fork, and 3.8 mi southeast of Myrtle Point.

DRAINAGE AREA .-- 305 m12.

PERIOD OF RECORD. -- October 1930 to September 1946.

1450

1080

809

624

366

208

97

47

33

25

19

15

12

2010

3330

GAGE.--Water-stage recorder. Datum of gage is 41.20 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 4, 1930, staff gage at same site and datum.

REMARKS.--No diversion above station. Flow regulated during winter and spring months by operation of log ponds.

AVERAGE DISCHARGE. -- 16 years, 743 ft3/s.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 23,600 ft $^3$ /s Jan. 2, 1933, gage height, 22.5 ft, from rating curve extended above 9,000 ft $^3$ /s; minimum daily, 1.0 ft $^3$ /s July 16, 17, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about Oct. 31, 1924, reached a stage of 25.8 ft, discharge, 31,800 ft<sup>3</sup>/s.

м													
,,	ONTHLY A	ND ANNUAL	MEAN DIS	SCHARGES	1931-46		MA				OF ANNUA	AL LOW FL 1932-46	OW
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	ARS, AND	ATED RECUI ANNUAL NO IN PERCEI	0 <b>N-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	9.1	225	67	65	.98	•7	1	12	5.9	3.	5 2.1		
NOVEMBER	11	2552	824	749	.91	9.2	3	13	6.7	4.	2 2.6	;	
DECEMBER	81	3960	1607	1199	•75	17.9	7	12	7.3	5.	2 3.9	) <del></del>	
JANUARY	600	4218	1801	968	•54	20.1	14	13	8.0	6.	1 4.8	š	
FEBRUARY	419	3922	1837	979	•53	20.5	30	14	11	9.	2 8.3		
1ARCH	215	4088	1452	930	.64	16.2	60	17	12	11	10		
APRIL	198	1919	755	428	•57	8.4	90	20	15	13	11		
MAY	73	1386	371	321	.87	4.1	120	29	20	17	14		
JUNE	59	341	158	97	.62	1.8	183	79	48	36	28		
JULY	28	124	55	28	.51	•6							
AUGUST	12	41	24	9.2	.39	.3							
SEPTEMBER		86	25	19	.78	.3							
ANNUAL	356	1250	743	244	.33	100							
MAGNI		PROBABILI				FLOW	MA					L HIGH FI 931-46	-OW
YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD 193	I-46 INTERVAL, IN PERCEI	, IN NT	PERIOD (CON-	BASI	ED ON PER HARGE, IN INTERV	CIOD OF I	RECORD 1	931-46 	RRENCE
DISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 193	I-46 INTERVAL, IN PERCEI		PERIOD (CON- SECU- TIVE	BASI DISCI	HARGE, IN INTERV EXCEEDAN	I CFS, FO	RECORD 1  OR INDICA YEARS, AN ABILITY,  25	931-46 TED RECUI D ANNUAL IN PERCEN	RRENCE
OISCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 193  CURRENCE ABILITY,	INTERVAL, IN PERCEI	, IN NT 	PERIOD (CON- SECU-	DISCH	HARGE, IN INTERV	CFS, FO	RECORD 1  OR INDICA YEARS, AN ABILITY,	931-46 TED RECUI D ANNUAL IN PERCEN	RRENCE
YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN	I CFS, FO	RECORD 1  OR INDICA YEARS, AN ABILITY,  25	931-46 TED RECUI D ANNUAL IN PERCEN	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDAN	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC AL, IN ' ICE PROB 10 10\$	RECORD 1  DR INDICA YEARS, AN ABILITY,  25 4%	931-46 TED RECUI D ANNUAL IN PERCEN 50 2%	RRENCE
1.25 80%	BASE  IN CFS, AND ANNUA  2  50%	FOR INDICAL EXCEEDAN	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FORAL, IN SIDE PROBLEM 10 10%	DR INDICA YEARS, AN ABILITY,  25 4\$	931-46  TED RECUI D ANNUAL IN PERCEN  50 2%	100 1%
1.25 80%	BASE  IN CFS, AND ANNUA  2  50%	FOR INDICAL EXCEEDAN	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	10D OF I	DR INDICA YEARS, AN ABILITY, 25 4% 19800 14200	931-46 TED RECUIT D ANNUAL IN PERCEN	100 1%
1.25 80%	BASE  IN CFS, AND ANNUA  2  50%	FOR INDICAL EXCEEDAN	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, IN INTERV EXCEEDAN 20% 14400 10300 7760	10 OF I	DR INDICA YEARS, AN ABILITY, 25 4% 19800 14200 10100	931-46 TED RECUIT D ANNUAL IN PERCEN	100 1%
1.25 80%	BASE  IN CFS, AND ANNUA  2  50%	FOR INDICAL EXCEEDAN	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 10500 7530 5700 4350 3090	HARGE, IN INTERVEXCEEDAN  5 20%  14400 10300 7760 5880 3950	10 CFS, F(AL, IN CE PROB) 10 10 10 10 10 10 10 10 10 10 10 10 10 1	DR INDICA YEARS, AN ABILITY, 25 4% 19800 14200 10100 7380	931-46 TED RECUID ANNUAL IN PERCENSO 2%	100 1%
1.25 80%	BASE  IN CFS, AND ANNUA  2  50%	FOR INDICAL EXCEEDAN	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH 2 50% 10500 7530 5700 4350	ED ON PER HARGE, IN INTERV EXCEEDAN  5 20%  14400 10300 7760 5880	10 105 10 10 10 10 10 10 10 10 10 10 10 10 10	DR INDICA YEARS, AN ABILITY,  25 4%  19800 14200 10100 7380 4790	931-46  TED RECUID ANNUAL IN PERCEN  50 2%	100 1%
1.25 80%	BASE  IN CFS, AND ANNUA  2  50%	FOR INDICAL EXCEEDAN	CATED RENCE PROB	CORD 193  CURRENCE ABILITY,  25 4%  7100	INTERVAL IN PERCEI	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCH 2 50% 10500 7530 5700 4350 3090 2470 2100	HARGE, IN INTERVEXCEEDAN  5 20%  14400 10300 7760 5880 3950 3160 2740	10 10% 16900 12100 8890 6640 4380 3500 3080	DR INDICA YEARS, AN ABILITY,  25 4%  19800 14200 10100 7380 4790 3850	931-46  TED RECUID ANNUAL IN PERCEN  50 2%	100 1%
1.25 80%	BASE  IN CFS, AND ANNUA  2  50%	FOR INDIG	CATED RENCE PROB	CORD 193  CURRENCE ABILITY,  25 4\$  7100	INTERVAL, IN PERCEI 50 2%	IN NT 100 15	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 10500 7530 5700 4350 3090 2470 2100 OF RECC	HARGE, IN INTERVEXCEEDAN  5 20%  14400 10300 7760 5880 3950 3160 2740  DRD 1931-	10 CFS, F(AL, IN CE PROB) 10 10 10 10 10 10 10 10 10 10 10 10 10 1	DR INDICA YEARS, AN ABILITY,  25 4%  19800 14200 10100 7380 4790 3850 3430	931-46  TED RECUID ANNUAL IN PERCEN  50 2%	100 1%

# 14326800 NORTH FORK COQUILLE RIVER NEAR FAIRVIEW, OR

LOCATION.--Lat 43°11'03", long 124°04'33", in SW\u00e4SE\u00e4 sec.35, T.27 S., R.12 W., Coos County, Hydrologic Unit 17100305, on right bank 0.2 mi downstream from Lost Creek, 2.2 mi south of Fairview, and at mile 22.2.

DRAINAGE AREA. -- 73.9 mi2.

1170

763

554

418

325

PERIOD OF RECORD. -- October 1963 to September 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 79.72 ft National Geodetic Vertical Datum of 1929 (from stadia survey). Prior to Aug. 17, 1978, at site 0.5 mi downstream at datum 16.38 ft lower with supplementary water-stage recorder and crest-stage gage at present site used during periods of backwater.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--18 years, 281 ft<sup>3</sup>/s, 51.57 in/yr, 203,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft<sup>3</sup>/s Mar. 2, 1972; maximum gage height, 18.80 ft, previous site and datum, Jan. 8, 1976, backwater from ponding in valley below; maximum gage height unaffected by backwater, 18.03 ft, previous site and datum, Jan. 8, 1976; minimum discharge, 2.0 ft<sup>3</sup>/s Sept. 9, 10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1981 reached a stage of 14.86 ft from flood mark, discharge, 8,350 ft<sup>3</sup>/s.

### STATISTICAL SUMMARIES

	MINIMIN	MAYIMINA		STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		NTERVAL,	IN YEA	R INDICAT RS, AND A BILITY, I	NNU <b>AL</b> N	ON-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.9	109	43	35	.81	1.3	1	4.1	2.9	2.4	2.1.		
NOVEMBER	29	1121	358	299	. 84	10.6	3	4.2	3.0	2.5	2.2		
DECEMBER	21	1530	729	371	.51	21.6	7	4.5	3.3	2.8	2.6		
IANUARY	47	1331	771	364	.47	22.8	14	5.0	3.6	3.1	2.8		
EBRUARY	105	894	499	240	.48	14.8	30	5.6	4.1	3.6	3.3		
MARCH	155	987	467	245	•52	13.8	60	7.8	5.4	4.6	4 - 1		
APRIL	121	573	281	124	.44	8.3	90	9.9	6.9	5.9	5.3		
IAY IUNE	42 20	310	132	70 25	•53	3.9	120	14 34	9.7	8.4	7.5		
IULY	11	130 33	53 19	25 7 <b>.4</b>	.47	1.6 .6	183		25	21	18		
UGUST	3.8	24	11	5.3	•39 •51	.3							
		24		7.2	• )	• •							
	3.9	60	19	18	.94	•6							
SEPTEMBER ANNUAL	89 	460 	281  TY OF IN	88 	.31 	100	 MA(				OF ANNUAL		
MAGNIT	89 TUDE AND BASE	460 PROBABILI D ON PERIO	281 TY OF IN OD OF RE	88  ISTANTANE CORD 196  CURRENCE	.31 	100  FLOW 	MA( PERIOD (CON-	BASED DISCHA	ON PERI	OD OF R	OF ANNUAL ECORD 190 R INDICATE EARS, AND	64-81  ED RECUI ANNUAL	RRENCE
MAGNIT MAGNIT SCHARGE, YEARS, A	89  TUDE AND BASE  IN CFS, AND ANNUA	460 PROBABILI' D ON PERIO FOR INDIO L EXCEEDAN	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANE CORD 196 CURRENCE IABILITY, 25	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU-	BASEI DISCHA	ON PERI	OD OF R	ECORD 196 R INDICATE EARS, AND BILITY, IN	64-81 ED RECUI ANNUAL N PERCEI	RRENCE
EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS,	89 FUDE AND BASE IN CFS,	460 PROBABILI D ON PERIO FOR INDIO L EXCEEDA	281 TY OF IN OD OF RE CATED RE	88 ISTANTANE CORD 196	.31 DUS PEAK F 4-81 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE	BASEC DISCHA E	ON PERI	OD OF R	ECORD 196 R INDICATE EARS, AND BILITY, II	64-81  ED RECUI  ANNUAL  N PERCEI	RRENCE
EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	89  TUDE AND BASE  IN CFS, AND ANNUA	460 PROBABILI' D ON PERIO FOR INDIO L EXCEEDAN	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANE CORD 196 CURRENCE IABILITY, 25	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU-	BASEI DISCHA	ON PERI	OD OF R	ECORD 196 R INDICATE EARS, AND BILITY, IN	64-81 ED RECUI ANNUAL N PERCEI	RRENCE
EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	89  TUDE AND BASE  IN CFS, AND ANNUA	PROBABILI' D ON PERIO FOR INDIO L EXCEEDAN 5 20%	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANE CORD 196 CURRENCE IABILITY, 25	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF R	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4%	64-81 ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A	89  TUDE AND BASE  IN CFS, ND ANNUA  2  50%	FOR INDIC EXCEEDAL	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANEI CORD 196 CURRENCE BABILITY, 25 4%	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	ON PERI	OD OF R  CFS, FOI L, IN YI E PROBAI  10 10%	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4%	64-81  ED RECUI ANNUAL N PERCEI  50 2%	RRENCE
MAGNIT  ISCHARGE, YEARS, A  1.25 80%	89 FUDE AND BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANEI CORD 196 CURRENCE BABILITY, 25 4%	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  3340 2700	ON PERI	OD OF R  CFS, FOI L, IN YI E PROBAI  10 10 5530 4120	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4%  6440 4630	64-81 ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A	89  TUDE AND BASE  IN CFS, ND ANNUA  2  50%	FOR INDIC EXCEEDAL	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANEI CORD 196 CURRENCE BABILITY, 25 4%	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  2 50%  3340 2700 2030	ON PERI	OD OF R  CFS, FOI L, IN YI E PROBAI  10 10 5530 4120 3130	R INDICATE EARS, AND BILITY, II 25 4% 6440 4630 3590	64-81  ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT  ISCHARGE, YEARS, A  1.25 80%	89  TUDE AND BASE  IN CFS, ND ANNUA  2  50%	FOR INDIC EXCEEDAL	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANEI CORD 196 CURRENCE BABILITY, 25 4%	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  2 50%  3340 2700	ON PERI	OD OF R  CFS, FOI L, IN YI E PROBAI  10 10 5530 4120	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4%  6440 4630	64-81 ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A	89  TUDE AND BASE  IN CFS, ND ANNUA  2  50%	FOR INDIC EXCEEDAL	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANEI CORD 196 CURRENCE BABILITY, 25 4%	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50% 3340 2700 2030 1390	ON PERI  RGE, IN INTERVA  EXCEEDANC  5 20%  4720 3620 2720 1830	OD OF R  CFS, FOI L, IN YI E PROBAI  10 10 5530 4120 3130 2110	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4\$  6440 4630 3590 2420	64-81  ED RECUI ANNUAL N PERCEI  50 2%	RRENCE
MAGNIT MA	89  TUDE AND BASE  IN CFS, ND ANNUA  2  50%	FOR INDIC EXCEEDAL	281 TY OF IN OD OF RE CATED RE NCE PROB	88 ISTANTANEI CORD 196 CURRENCE BABILITY, 25 4%	.31 OUS PEAK F 4-81 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  2 50%  3340 2700 2030 1390 1080	700 ON PERI	OD OF R  CFS, FOI L, IN YI E PROBAI  10 10 5530 4120 3130 2110 1530	R INDICATE EARS, AND BILITY, II 25 4% 6440 4630 3590 2420 1690	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE

30%

260

40%

166

98

60%

52

26

19

85%

11

90%

7.3

95%

5.1

199 COQUILLE RIVER BASIN 14327000 NORTH FORK COQUILLE RIVER NEAR MYRTLE POINT, OR

LOCATION.--Lat 43°04'15", long 124°06'20", in SE4 sec.10, T.29 S., R.12 W., Coos County, Hydrologic Unit 17100305, near center of span on downstream side of highway bridge 1.6 mi northeast of Myrtle Point, and at mile 4.1.

DRAINAGE AREA .-- 282 mi2.

4190

2650

1860

1430

1120

891

558

342

184

95

69

PERIOD OF RECORD. -- December 1928 to September 1946, October 1963 to September 1968.

GAGE.--Wire-weight gage read once daily and crest-stage gage. Datum of gage is 2.79 ft National Geodetic Vertical Datum of 1929.

Prior to Oct. 1, 1930, chain gage at present site and different datum. Oct. 1, 1930, to Sept. 30, 1946, water-stage recorder at site 4.5 mi upstream at datum 8.15 ft higher.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--22 years (water years 1930-46, 1964-68), 945 ft<sup>3</sup>/s, 684,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 37.67 ft; minimum observed, 1.2 ft<sup>3</sup>/s Aug. 12, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 41.2 ft sometime during winter of 1909-10. Flood of Dec. 26, 1955, reached a stage of 37.0 ft, discharge,  $20,000 \text{ ft}^3/\text{s}$ .

МС	ONTHLY AN	ND ANNUAL	MEAN DIS	SCHARGES	1930-68		MA				OF ANNUAL RECORD 19		OW
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICAT ARS, AND A ABILITY, I	NNUAL N	0N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	22	500	134	121	•90	1.2	1	22	13	9.0	0 6.6		
IOVEMBER	24	3247	1124	925	.82	9.9	3	23	13	9.	7 7.3		
DECEMBER	342	6110	2096	1469	.70	18.4	7	24	14	11	8.2		
JANUARY	854	4762	2479	1150	.46	21.8	14	25	15	12	9.0		
EBRUARY	530	3781	2056	949	.46	18.1	30	28	18	14	11		
MARCH	427	3949	1670	905	•54	14.7	60	32	22	18	16		
APRIL	276	2404	912	500	•55	8.0	90	39	28	24	22		
4AY	125	1687	470	323	•69	4.1	120	53	38	33	30		
JUNE	83	986	259	216	.83	2.3	183	126	87	72	62		
JULY	48	183	92	43	.47	.8							
NUGUST	11	80	45	21	.47	.4							
EPTEMBER	15	219	50	45	.90	.4							
DEI TEMBER	• • •												
ANNUAL	517 	1383 PROBABILI			.28  OUS PEAK F 0-68	100 	 MAG				OF ANNUAL		
MAGNIT MAGNIT DISCHARGE, YEARS, A	517  FUDE AND BASE  IN CFS,	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	TY OF IN OD OF RE CATED RE	STANTANE CORD 193 CURRENCE	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD	BASI	ED ON PER  HARGE, IN INTERV	RIOD OF F		30-68 ED RECUF	RENCE
MAGNIT	517 FUDE AND BASE	PROBABILI D ON PERIO	TY OF IN	ISTANTANE CORD 193	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE	DISCH	HARGE, IN INTERV EXCEEDAN	CE PROBA	RECORD 19 OR INDICAT YEARS, AND ABILITY, !	30-68 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT SCHARGE, YEARS, A 1.25 80\$	517  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE ICORD 193 CURRENCE IABILITY,	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU-	BASI DISCH	HARGE, IN EXCEEDAN	CFS, FO	RECORD 19  OR INDICAT YEARS, AND ABILITY, I	30-68 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE CORD 193 	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE	DISCH	ED ON PER HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC VAL, IN N ICE PROBA	RECORD 19  OR INDICAT (FARS, AND ABILITY, !  25 4%	30-68 ED RECUF ANNUAL N PERCEN	RRENCE
MAGNIT MAGNIT DISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE ICORD 193 CURRENCE IABILITY,	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, F( VAL, IN ) ICE PROBA 10%	RECORD 19	30-68  ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNIT MAGNIT DISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILI'D ON PERIO	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE ICORD 193 CURRENCE IABILITY,	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	1 CFS, F( /AL, IN ) ICE PROB/ 10%	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1 25 4%	30-68 ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNIT MAGNIT IISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILI'D ON PERIO	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE ICORD 193 CURRENCE IABILITY,	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCH 2 50% 8920 7530 6220	HARGE, IN INTERNAL EXCEEDAN 5 20% 13800 10900 8620	10 OF F	26800 18700 12900	30-68  ED RECUF ANNUAL N PERCEN 50 2%	100
MAGNIT DISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILI'D ON PERIO	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE ICORD 193 CURRENCE IABILITY,	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASI DISCH 2 50% 8920 7530 6220 4930	HARGE, IN INTERVENCE EXCEEDAN 5 20% 13800 10900 8620 6620 6620	10 OF F	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1 25 4%	30-68  ED RECUF ANNUAL N PERCEN 50 2%	TOO 1%
MAGNIT MAGNIT IISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILI'D ON PERIO	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE ICORD 193 CURRENCE IABILITY,	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASI DISCH 2 50% 8920 7530 6220 4930 3600	HARGE, IN INTERVEXCEEDAN  5 20%  13800 10900 8620 6620 4680	I CFS, FC (AL, IN ) ICE PROB/ 10 10% 18600 13900 10400 7590 5300	26800 18700 18700 18700 18700 18900 8660 5990	30-68  ED RECUF ANNUAL N PERCEN  50 2%	TOO 1%
MAGNIT ISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILI'D ON PERIO	TY OF IN DD OF RE CATED RE NCE PROB	ISTANTANE ICORD 193 CURRENCE IABILITY,	OUS PEAK F 0-68 INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCH 2 50% 8920 7530 6220 4930	HARGE, IN INTERVENCE EXCEEDAN 5 20% 13800 10900 8620 6620 6620	10 OF F	DR INDICAT YEARS, AND ABILITY, ! 25 4% 26800 18700 12900 8660	30-68  ED RECUF ANNUAL N PERCEN  50 2%	100
MAGNIT DISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILI'D ON PERIO	TY OF IND OF RE	CURRENCE ASSILLITY, 25 4%	OUS PEAK F 0-68 INTERVAL IN PERCEI	FLOW  IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 	BASI DISCI 2 50% 8920 7530 6220 4930 3600 2890 2560	13800 10900 8620 4680 3690 3270	10 CFS, FC (AL, IN NICE PROBAL) 10 10% 18600 13900 10400 7590 5300 4120 3650	26800 18700 18700 18700 18700 12900 8660 5990 4600	30-68  ED RECUF ANNUAL N PERCEN  50 2%	TOO 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	517  FUDE AND BASE  IN CFS, NND ANNUA  2 50%	PROBABILITO ON PERIOD ON PERIOD ON PERIOD OF STATE OF STA	TY OF INDO OF RECATED RECEPROB	ISTANTANE CORD 193 CURRENCE ABILITY, 25 4% 6500	OUS PEAK FOR THE OF DAILY N	FLOW  IN  IN  IN  IN  IN  IN  IN  IN  IN  I	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCH 2 50% 8920 7530 6220 4930 3600 2890 0560 0F RECC	HARGE, IN INTERVENCEDAN  13800 10900 8620 4680 3690 3270  DRD 1930-	10 CFS, FC (AL, IN ) (CFS, FC (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (CFS, FC) (AL, IN ) (AL, I	26800 18700 12900 8660 5990 4060	30-68  ED RECUF ANNUAL N PERCEN  50 2%	100 1%

200

## ROGUE RIVER BASIN

### 14327500 ROGUE RIVER ABOVE BYBEE CREEK, NEAR UNION CREEK, OR

LOCATION.--Lat 42°56'05", long 122°25'15", in NEt sec.26, T.30 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on left bank 700 ft upstream from Bybee Creek, 2.3 mi northeast of village of Union Creek, and at mile 186.1 (river-profile survey).

DRAINAGE AREA .-- 156 mi2.

1140

765

578

521

446

355

322

275

262

242

PERIOD OF RECORD. -- January 1930 to September 1952.

GAGE.--Water-stage recorder. Altitude of gage is 3,465 ft, from river-proflle map. Prior to Nov. 23, 1934, water-stage recorder at site 200 ft downstream at different datum.

 $\label{eq:REMARKS.--No regulation or diversion above station.}$ 

AVERAGE DISCHARGE.--22 years (water years 1931-52), 498 ft<sup>3</sup>/s, 360,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,430 ft<sup>3</sup>/s Nov. 29, 1942 and Dec. 28, 1945, gage height, 7.84 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s by logarithmic plotting; minimum daily, 180 ft<sup>3</sup>/s Jan. 7, 1937.

			ucau	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON- SECU-	DISC	INTERVAL	, IN YEA	OR INDICAT ARS, AND A ABILITY, I	ANNUAL NO	N-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	227	564	317	85	.27	5.3	1	257	219	201	188		
NOVEMBER	234	803	414	151	•36	6.9	3	263	227	210	198		
DECEMBER JANUARY	254	1041	481	203	.42	8.0 7.5	7	267	23 <b>3</b> 237	217 221	205 209		
EBRUARY	238 248	729 820	448 445	144 141	.32 .32	7.4	14 30	272 277	242	226	213 .		
IARCH	317	758	500	124	.25	8.4	60	285	242	230	216		
PRIL	481		735	156	.21		90	293	253	234	220		
IAY	481 373	1022 1389	735 916	291	•21 •32	12.3 15.3	120	293 301	253 259	234	220 227		
UNE	271	1663	718	335	.47	12.0	183	334	282	261	246		
IULY	222	666	716 391	107	.27	6.5	103	<i></i>	202	201	240		
UGUST	204	467	315	63	.20	5.3							
EPTEMBER	204	426	300	54	.18	5.0							
NNUAL	313	692	498	97	.20	100							
MAGNIT		PROBABILI D ON PERI				FLOW	MAC				OF ANNUAL ECORD 19		.ow
OISCHARGE,	BASE IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD 193 CURRENCE	1-52 INTERVAL IN PERCE	 , !N NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R CFS, FO		31-52 ED RECUR	RENCE
I SCHARGE ,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD 193	1-52 INTERVAL IN PERCE	, IN	PERIOD (CON- SECU- TIVE	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, I	31-52 ED RECUR ANNUAL N PERCEN	RRENCE
ISCHARGE YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU-	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y	ECORD 19 R INDICAT EARS, AND BILITY, I	31-52 ED RECUR ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA	FOR INDIV L EXCEEDA	OD OF RE	CORD 193 CURRENCE ABILITY,	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 19  R INDICAT EARS, AND BILITY, I  25 4%	31-52 ED RECUR ANNUAL N PERCEN	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RE	CORD 193  CURRENCE ABILITY,  25 4%	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN  5 20%	CFS, FO AL, IN Y CE PROBA 10 10%	ECORD 19  REINDICAT EARS, AND BILITY, I  25 4%  3640	ED RECUR ANNUAL N PERCEN 2%	RRENCE IT 100 1%
I SCHARGE, YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIV L EXCEEDA	OD OF RE	CORD 193 CURRENCE ABILITY, 25 4%	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN 5 20% 2560 2050	CFS, FO AL, IN Y CE PROBA 10 10%	RECORD 19 PR INDICAT FEARS, AND BILITY, I 25 4% 3640 2770	31-52 ED RECUR ANNUAL N PERCEN	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RE	CORD 193 CURRENCE ABILITY, 25 4%	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  1850 1540 1300	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  2560 2050 1680	CFS, FO AL, IN Y CE PROBA 10 10% 3030 2380 1920	RECORD 19	ED RECUR ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RE	CORD 193 CURRENCE ABILITY, 25 4%	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1850 1540 1300 1160	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 2560 2050 1680 1480	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 5 3030 2380 1920 1670	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 3640 2770 2230 1900	ED RECUR ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RE	CORD 193 CURRENCE ABILITY, 25 4%	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 3030 2380 1920 1670 1470	R INDICAT EARS, AND BILITY, I 	ED RECUR ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RE	CORD 193 CURRENCE ABILITY, 25 4%	1-52 INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1850 1540 1300 1160	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 2560 2050 1680 1480	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 5 3030 2380 1920 1670	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 3640 2770 2230 1900	ED RECUR ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RECOME	CORD 193  CURRENCE ABILITY, 25 4% 4450	1-52 INTERVAL IN PERCE 50 2%	, IN NT  1% 	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  1850 1540 1300 1160 1050 934 824	D ON PER  ARGE, IN INTERV EXCEEDAN  20%  2560 2050 1680 1480 1320 1140 988	CFS, FO AL, IN Y CE PROBA  10 10 10 3030 2380 1920 1670 1470 1240 1080	R INDICAT FARS, AND BILITY, I 25 4% 3640 2770 2230 1900 1650 1350	ED RECUR ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	CATED RENCE PROB	CORD 193 CURRENCE ABILITY, 25 4% 4450 N TABLE	1-52 INTERVAL IN PERCE 50 2% OF DAILY	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1850 1540 1300 1160 1050 934 824  OF RECO	D ON PER	10D OF R CFS, FO AL, IN Y CE PROBA 10 10\$ 3030 2380 1920 1670 1470 1240 1080	RECORD 19 R INDICAT EARS, AND BILITY, I  25 4%  3640 2770 2230 1900 1650 1170	ED RECUR ANNUAL N PERCEN 50 2%	100 1%

# 14328000 ROGUE RIVER ABOVE PROSPECT, OR

LOCATION.--Lat 42°46'30", long 122°29'55", in SE‡NE‡ sec.19, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, Rogue River National Forest, on left bank 1.4 mi upstream from Pacific Power and Light Co. diversion dam, 1.8 mi northwest of Prospect, and at mile 173.4.

DRAINAGE AREA. -- 312 mi2.

PERIOD OF RECORD.--January 1908 to February 1912, October 1923 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1925, published as "near Prospect."

GAGE.--Water-stage recorder. Altitude of gage is 2,620 ft, from river-profile map. Prior to Feb. 17, 1912, nonrecording gage at several sites within a few hundred feet upstream at various datums.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.—62 years (water years 1909-11, 1924-82), 820  $ft^3/s$ , 35.69 in/yr, 594,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,400 ft³/s Dec. 22, 1964, gage height, 11.55 ft, from floodmark, from rating curve extended above 9,000 ft³/s on basis of slope-area measurement at 16,600 ft³/s; minimum observed, 200 ft³/s Nov. 20, 1931.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1909-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1910-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICA RS, AND A BILITY,	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	283	957	453	118	.26	4.6	1	357	297	269	248	226	213
NOVEMBER	292	2062	707	334	.47	7.2	3	367	306	<b>27</b> 8	256	233	219
DECEMBER	313	3368	929	55 <b>5</b>	.60	9.4	7	371	311	284	263	241	227
JANUARY	292	2158	920	444	.48	9.3	14	377	316	<b>2</b> 88	267	245	231
FEBRUARY	325	2093	949	385	.41	9.6	30	386	323	294	272	250	235
MARCH	480	2820	946	356	.38	9.6	60	396	332	303	281	257	243
APRIL	649	1888	1177	322	. 27	12.0	90	408	341	309	286	260	245
MAY	491	2263	1372	484	. 35	13.9	120	422	351	319	294	269	253
JUNE	335	2564	992	455	. 46	10.1	183	498	402	360	329	297	278
JULY	253	1010	545	164	.30	5.5							
AUGUST	222	659	439	102	.23	4.5							
SEPTEMBER	230	602	4 19	88	•21	4.3							
ANNUAL	411	1268	821	<b>19</b> 9	.24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1909-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1909-82

ISCHARGE, YEARS, AI							PERIOD (CON-	DISC	HARGE, IN INTERV	'AL, ÍN	YEARS, A	ND ANNUA	L
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3060	4770	7660	9930	13200	16000	19100							
							1	4130	6470	8180	10500	12300	14200
<b>WEIGHTED</b>	SKEW =	.239					3	3310	5090	6410	8250	9740	11300
							7	2590	3730	4520	<b>5</b> 58 <b>0</b>	6390	7240
							15	2080	2790	3240	3790	4180	4570
							30	1760	2270	2560	2900	3130	3340
							60	1480	1870	2080	2320	2480	2620
							90	1330	1640	1810	1990	2110	2220

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1909-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIM	Ξ		
5	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85 <b>%</b>	90%	95%
1920	1520	1290	1120	991	891	739	636	550	477	444	418	389	358	323

### 14330000 ROGUE RIVER BELOW PROSPECT, OR

LOCATION.--Lat 42°43'50", long 122°30'55", in SELNWL sec.6, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 600 ft downstream from Prospect No. 1 powerplant, 1.4 mi downstream from Mill Creek, 2.0 mi southwest of Prospect, 2.1 mi upstream from South Fork Rogue River, and at mile 169.4.

DRAINAGE AREA .-- 379 mi2.

5%

2780

10%

2320

15%

2050

20%

1890

25%

1750

30%

1640

40%

1470

50%

1340

60%

1230

70%

1120

75%

1060

80%

992

85%

927

90%

868

95%

808

PERIOD OF RECORD. -- August 1913 to September 1930, October 1968 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,964.56 ft National Geodetic Vertical Datum of 1929 (Pacific Power and Light Cobench mark). Prior to September 1927 nonrecording gage at site 1,000 ft upstream, above powerplants, at different datum, also concurrent nonrecording gage on headrace to obtain equivalent combined flow.

REMARKS.--Small fluctuations caused by powerplant 600 ft above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--14 years (water years 1969-82), 1,508 ft<sup>3</sup>/s, 1,092,546 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft<sup>3</sup>/s Jan. 18, 1971, gage height, 7.62 ft, from high-water mark; minimum, 205 ft<sup>3</sup>/s Sept. 17, 22, 24, 1980, caused by regulation of diversion gates upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 12.4 ft Dec. 22, 1964, from floodmarks, discharge, 25,000 ft<sup>3</sup>/s, from records for station above Prospect and for station below South Fork Rogue River near Prospect after adjusting for estimated intervening tributary inflow.

	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1969-82		MAG				OF ANNUAL RECORD 19		OW
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL N	-NC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	795	1230	978	160	.16	5.4	1	820	708	659	624		
NOVEMBER	868	2100	1308	333	•25	7.2	3	839	725	674	637		
ECEMBER	979	2736	1668	555	•33	9.2	7	852	735	684	645		
IANUARY	946	2894	1833	583	.32	10.1	14	870	749	696	656		
FEBRUARY	946	2651	1650	408	.25	9.1	30	893	771	718	679		
MARCH	1045	3627	1764	618	.35	9.7	60	918	800	750	713		
\PR1L	1272	2463	1770	340	.19	9.8	90	942	825	775	738		
YAY	1276	3282	2143	626	.29	11.8	120	969	852	802	766		
JUNE	1119	2923	1733	617	. 36	9.6	183	1070	949	898	862		
IULY	873	1660	1233	288	•23	6.8							
AUGUST	770	1337	1050	210	.20	5.8							
EPTEMBER	761	1236	983	174	- 18	5.4							
ANNUAL MAGNIT					.20 OUS PEAK F	100 	 MAG				OF ANNUAL		
MAGNIT	FUDE AND BASE	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 196	OUS PEAK F	FLOW	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 19  OR INDICATYEARS, AND	969-82 TED RECUR D ANNUAL	RENCE
MAGNIT	FUDE AND BASE	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 196	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW		BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 19	969-82 TED RECUR D ANNUAL	RENCE
MAGNIT ISCHARGE, YEARS, /	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	CFS, FOAL, IN CE PROB	RECORD 19 OR INDICATIVE ARS, AND ABILITY,	969-82 TED RECUP D ANNUAL IN PERCEN	RRENCE
MAGNIT	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	CFS, FO	RECORD 19 OR INDICATIVE AND ABILITY,	969-82 TED RECUF D ANNUAL IN PERCEN	RRENCE
MAGNIT	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FCAL, IN CE PROB	RECORD 19 DR INDICA YEARS, AND ABILITY, 125 4%	969-82 TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE
MAGNIT	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 20% 7940	CFS, FCAL, IN CE PROB. 10 10 9470	OR INDICA YEARS, AND ABILITY, 25 4%	FED RECUPD ANNUAL IN PERCEN	100 1%
MAGNIT ISCHARGE, YEARS, / 1.25 80%	FUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  7940 6610	CFS, FCAL, IN CE PROB/ 10 10 9470 7750	RECORD 19 OR INDICA YEARS, AND ABILITY, 25 4% 11200 8970	969-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
MAGNIT ISCHARGE, YEARS, / 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  5330 4600 3740	D ON PER  INTERV EXCEEDAN  5 20%  7940 6610 5050	CFS, FG AL, IN CE PROB/ 10 10% 	OR INDICA YEARS, AND ABILITY, 25 4% 11200 8970 6450	969-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
MAGNIT ISCHARGE, YEARS, / 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  5330 4600 3740 3090	D ON PER	10D OF I CFS, F( AL, IN CE PROB) 10 10% 9470 7750 5740 4340	OR INDICA YEARS, AND ABILITY, 25 4% 11200 8970 6450 4740	969-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
MAGNIT	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  5330 4600 3740 3090 2620	D ON PER	100 OF 1 CFS, FG AL, IN CE PROB/ 10 10% 9470 7750 5740 4340 3580	DR INDICA YEARS, AND ABILITY, 25 4% 11200 8970 6450 4740 3900	FED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
MAGNIT	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH 2 50% 5330 4600 3740 3090 2620 2240	D ON PER	100 OF 1 CFS, F( AL, IN' 10 10% 9470 7750 5740 4340 3580 2980	DR INDICA YEARS, AND ABILITY, 25 4% 11200 8970 6450 4740 3900 3250	FED RECUED ANNUAL IN PERCENSON	100 1%
MAGNIT	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 9-82 INTERVAL, IN PERCEN	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  5330 4600 3740 3090 2620	D ON PER	100 OF 1 CFS, FG AL, IN CE PROB/ 10 10% 9470 7750 5740 4340 3580	DR INDICA YEARS, AND ABILITY, 25 4% 11200 8970 6450 4740 3900	FED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
MAGNIT ISCHARGE, YEARS, / 1.25 80\$	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	ISTANTANE CORD 196 CURRENCE ABILITY, 25 4%	OUS PEAK F 9-82 INTERVAL, IN PERCEN 50 1	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  5330 4600 3740 3090 2620 2240 2090	D ON PER  ARGE, IN INTERV EXCEEDAN  7940 6610 5050 3930 3250 2720 2520	100 OF I CFS, FI AL, IN CE PROB/ 10 10% 9470 7750 5740 4340 3580 2980 2750	DR INDICA YEARS, AND ABILITY, 25 4% 11200 8970 6450 4740 3900 3250	FED RECUED ANNUAL IN PERCENSON	100 13

### 14330500 SOUTH FORK ROGUE RIVER ABOVE IMNAHA CREEK, NEAR PROSPECT, OR

LOCATION.--Lat 42°42'25", long 122°23'20", in NE¼ sec.18, T.33 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on left bank 900 ft upstream from Imnaha Creek, 1,200 ft upstream from South Fork diversion dam, and 6 mi southeast of Prospect.

DRAINAGE AREA. -- 52 mi<sup>2</sup>.

PERIOD OF RECORD. -- October 1931 to September 1949.

GAGE.--Water-stage recorder. Altitude of gage is 3,390 ft, from river-profile map.

REMARKS. -- No diversion or regulation above station.

AVERAGE DISCHARGE.--18 years, 127 ft3/s, 92,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft<sup>3</sup>/s Dec. 1, 1942, gage height, 6.21 ft, from rating curve extended above 250 ft<sup>3</sup>/s on basis of former curve defined to 1,000 ft<sup>3</sup>/s; minimum, 27 ft<sup>3</sup>/s Oct. 1-21, 1931.

М	ONTHLY AN	ND ANNUAL	MEAN DIS	SCHARGES	1932-49		MAC			ABILITY IOD OF R	OF ANNUAL ECORD 19	_ LOW FL( 933-49	WC
~~~~	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 <b>2%</b>	100
OCTOBER	34	77	53	11	.21	3.5	1	45	39	36	34		
NOVEMBER	34	192	80	37	.47	5.2	3	46	39	37	34		
DECEMBER	34	325	109	70	.64	7.2	7	46	40	37	35		
JANUARY	41	319	118	70	.59	7.8	14	47	41	38	36	~~	-
EBRUARY	37	241	109	51	. 47	7.2	30	49	42	39	36		
MARCH	60	220	127	46	. 36	8.3	60	51	43	40	37 -		
APRIL	93	303	205	66	.32	13.5	90	54	45	41	38		_
MAY	77	490	279	106	.38	18.3	120	57	48	43	40		-
JUNE	58	490	215	109	.51	14.1	183	68	56	51	47		_
JULY	44	162	101	31	.30	6.6	105			ر 			
AUGUST	36	100	69	17	.25	4.6							
SEPTEMBER		80	58	12		3.8							
SEFIEMBER	34	80	28	12	.21	2.8							
ANNUAL	76	202	127	31	.24	100							
MAGNI		PROBABILIT D ON PERIC				FLOW	MAG			ABILITY (	OF ANNUAL ECORD 19	. HIGH FL 32-49	.ow
OI SCHARGE	BASE , IN CFS,		OD OF RE	CORD 193	2-49  INTERVAL,	, 1N	PERIOD	BASE(	ON PER	CFS, FOI	ECORD 19 R INDICAT	32-49 ED RECUR	RENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD 193 CURRENCE ABILITY,	INTERVAL, IN PERCEN	, 1N	PERIOD (CON- SECU-	BASE(	O ON PER	CFS, FOI	ECORD 19 R INDICAT EARS, AND BILITY, I	32-49 ED RECUR	RENCE
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD 193 CURRENCE	2-49 INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	DISCH/	O ON PER ARGE, IN INTERV EXCEEDANCE	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I	32-49 ED RECUR ANNUAL N PERCEN	RENCI
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2	FOR INDIC L EXCEEDAN	OD OF RECATED RENCE PROB	CORD 193 CURRENCE ABILITY,	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU-	BASE(	O ON PER	CFS, FOI AL, IN YI	ECORD 19 R INDICAT EARS, AND BILITY, I	32-49 ED RECUR ANNUAL N PERCEN	RENCI
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2	FOR INDIC L EXCEEDAN	CATED RENCE PROB	CORD 193 CURRENCE ABILITY,	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE	DISCH/	O ON PER ARGE, IN INTERV EXCEEDANCE	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I	32-49 ED RECUR ANNUAL N PERCEN	RENCI
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	CATED RENCE PROB	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE	DISCH/	O ON PER ARGE, IN INTERV EXCEEDANCE	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I	32-49 ED RECUR ANNUAL N PERCEN	RENCI
01 SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	CATED RENCE PROB	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/	O ON PER ARGE, IN INTERV EXCEEDANC 5 20%	CFS, FOR AL, IN YI CE PROBAL 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	32-49 ED RECUR ANNUAL N PERCEN 50 2%	RENCI
01 SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RENCE PROB	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E2 50%	O ON PER ARGE, IN INTERV EXCEEDANC 5 20%	CFS, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECUR ANNUAL N PERCEN 50 2%	RENCI
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RENCE PROB	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1	DISCH/ E	O ON PER ARGE, IN INTERV EXCEEDANC 5 20% 880 701	CFS, FOR AL, IN YI CE PROBAL 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 1500 1140	ED RECUR ANNUAL N PERCEN 50 2%	RENCI
DISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RENCE PROB	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 574 476 404	0 ON PER ARGE, IN INTERV. EXCEEDANG 5 20% 880 701 564 478	CFS, FOI AL, IN YI CE PROBAL 10 10%	R INDICAT EARS, AND BILITY, I 25 4% 1500 1140 836	ED RECUR ANNUAL N PERCEN 50 2%	RENC
01 SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RENCE PROB	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 574 476 404 353 320	0 ON PER NRGE, IN INTERV. EXCEEDAN. 5 20% 880 701 564 478 424	CFS, FOI AL, IN YI CE PROBAL 10 10% 1130 880 679 558 483	R INDICAT EARS, AND BILITY, I 25 4% 1500 1140 836 658 551	32-49 ED RECUR ANNUAL N PERCEN 50 2%	RENC
01 SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RENCE PROB	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E 2 50% 574 476 404 353	0 ON PER ARGE, IN INTERV. EXCEEDANG 5 20% 880 701 564 478	100 OF RI CFS, FOI AL, IN YI CE PROBAL 10 10% 1130 880 679 558	ECORD 19  R INDICAT EARS, AND BILITY, I  25 4%  1500 1140 836 658	32-49  ED RECUF  ANNUAL  N PERCEN  50  2%	RENC
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	CATED RE	CORD 193  CURRENCE HABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 1100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 574 476 404 353 320 280 242	880 701 547 880 701 547 424 366 311	CFS, FOI AL, IN YI E PROBAL 10 10% 1130 880 679 558 483 413 349	1500 1140 836 658 551 462	32-49  ED RECUF  ANNUAL  N PERCEN  50  2%	RENC
01 SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN 5 20%	DO OF RECATED RESIDENCE PROBLEM 10 10% 1390 DURATIO	CURRENCE ABILITY, 25 4% 1780	INTERVAL, IN PERCEN 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH/ 2 50% 574 476 404 353 320 280 242 OF RECOF	880 701 554 478 424 366 311	CFS, FOI AL, IN YI E PROBAL 10 10% 1130 880 679 558 483 413 349	R INDICAT EARS, AND BILITY, I 25 4% 1500 1140 836 658 551 462 389	32-49  ED RECUF  ANNUAL  N PERCEN  50  2%	RENC
1.25 80% 496 WEIGHTEI	BASE  , IN CFS, AND ANNUA  2 50%  731  D SKEW =	FOR INDICL EXCEEDAN  5 20%  11110  .225	DD OF RECEATED RESIDENCE PROBLEM 10 10% 1390 DURATIO	CURRENCE HABILITY, 25 4% 1780  N TABLE	INTERVAL, IN PERCEN 50 2%  OF DAILY M	IN NT 100 1% 1% 100 1% 100 1% 100 1% 100 100	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  I FOR PERIOD  EXCEEDED FOR	DISCH/  1 2 50%  574 476 404 353 320 280 242  OF RECOF	880 701 564 701 564 311 8D 1932-4	1130 880 679 558 413 349	R INDICAT EARS, AND BILITY, I 25 4% 1500 1140 836 658 551 462 389	32-49 ED RECUF ANNUAL N PERCEN 50 2%	RENCE
01 SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICL EXCEEDAN 5 20% 11110 11 .225	DO OF RECATED RESIDENCE PROBLEM 10 10% 10% 10% 10% 10% 10% 10% 10% 10%	CURRENCE HABILITY, 25 4% 1780  N TABLE CFS, WHILL 25%	INTERVAL, IN PERCEN 50 2%  OF DAILY M	IN NT 100 1% 1% 100 1% 100 1% 100 1% 100 100	PERIOD (CON- SECU- TIVE DAYS) 	DISCH/ 2 50% 574 476 404 353 320 280 242 OF RECOF	880 701 554 478 424 366 311	CFS, FOI AL, IN YI E PROBAL 10 10% 1130 880 679 558 483 413 349	R INDICAT EARS, AND BILITY, I 25 4% 1500 1140 836 658 551 462 389	32-49  ED RECUF  ANNUAL  N PERCEN  50  2%	10 11

## 14331000 IMNAHA CREEK NEAR PROSPECT, OR

LOCATION.--Lat 42°41'20", long 122°23'00", in NEt sec.18, T.33 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on left bank 1,200 ft upstream from mouth and 6 mi southeast of Prospect.

DRAINAGE AREA.--26 mi², approximately.

102

84

70

60

52

47

39

32

28

25

23

22

21

20

19

PERIOD OF RECORD. -- September 1931 to October 1949.

GAGE.--Staff gage. Altitude of gage is 3,400 ft, from river-profile map.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--18 years (water years 1932-49), 42.8 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500 ft³/s Feb. 13, 1945, gage not read, computed on basis of records for South and Middle Forks Rogue River near Prospect; minimum observed, 11 ft³/s Dec. 14, 1931, gage height, 0.46 ft.

STATISTICAL SUMMARIES

	 MINIMUM		MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A	ANNUAL NO	ON-
MONTH	(CFS)	MAXIMUM (CFS)	(CFS)	TION (CFS)	VARI- ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	17	31	22	4.0	.18	4.3	1	19	16	15	15		
NOVEMBER	19	67	29	12	.40	5.6	3	19	17	16	15		
DECEMBER	21	107	41	22	.54	7.9	7	19	17	16	15		~-
JANUARY	19	126	48	28	.58	9.4	14	20	17	16	16		
FEBRUARY	21	84	47	17	.37	9.1	30	20	18	17	16		
MARCH	<b>2</b> 2	81	49	17	.34	9.5	60	20	18	17	16		
APRIL	28	115	71	26	.37	13.6	90	21	18	17	17		
MAY	27	148	78	34	.44	15.1	120	22	19	18	17		
JUNE	23	112	56	24	.43	10.8	183	25	21	19	18		
JULY	19	53	32	8.9	. 28	6.1							
AUGUST	16	35	23	4.8	.21	4.5							
SEPTEMBER	16	32	22	4.1	. 19	4.2							
ANNUAL  MAGN I		70 PROBABILI D ON PERIO				100  FLOW	 MAG				DF ANNUAL		.ow
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INDOOR RE	ISTANTANE CORD 1934 CURRENCE BABILITY,	DUS PEAK 1-49 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASEI DI SCH	ON PERI	CFS, FOF		34-49 ED RECUR	RRENCE
MAGNI	TUDE AND BASE	PROBABILI D ON PERIO	TY OF IN	ISTANTANE CORD 1934	DUS PEAK 1-49 INTERVAL IN PERCE	FLOW	PERIOD	BASEI DI SCH	ON PERI	CFS, FOF	ECORD 19 R INDICATEARS, AND	34-49 ED RECUR	RRENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	TY OF INDOD OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	DUS PEAK 4-49 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASEI DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANCE	CFS, FOR AL, IN YECE PROBAE	R INDICATEARS, AND	ED RECUF ANNUAL N PERCEN	RRENCE IT
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAL 5 20%	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	OUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASEI DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANCE	CFS, FOR AL, IN YECE PROBAE	R INDICATEARS, AND	ED RECUF ANNUAL N PERCEN	RRENCE IT
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAL 5 20%	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	OUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	O ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOF AL, IN YE DE PROBAE	ECORD 19 R INDICAT EARS, AND BILITY, !  25 4%	ED RECUF ANNUAL N PERCEN	RRENCE IT
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	OUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH, 2 50%	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOF AL, IN YE EE PROBAE 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	OUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1	BASEI  DISCH,  2  50%  163 141	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOR CFS, FOR AL, IN YE E PROBAE 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 501 361	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	OUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH/ 2 50% 163 141 118	ARGE, IN INTERVA EXCEEDANC 5 20% 277 222 175	CFS, FOF AL, IN YE CE PROBAE 10 10 368 281 214	25 45 501 361 264	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	OUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHI 2 50% 163 141 118 104	5 20% 277 222 175	10 TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE TO SEE	25 4 501 361 264 208	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 1934 CURRENCE BABILITY,	OUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH/ 2 50% 163 141 118 104 93	277 222 175 147 128	CFS, FOF LL, IN YE E PROBAE 10 10% 368 281 214 175 150	R INDICAT EARS, AND BILITY, I 	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI'D ON PERIO	TY OF INDO OF RE	STANTANEC CORD 1934 CURRENCE BABILITY, 25 4%	DUS PEAK 4-49 INTERVAL IN PERCE 50 2%	FLOW  , IN  NT  1000 11%	PERIOD (CON- SECU- TIVE DAYS) 	DISCHi 2 50%  163 141 118 104 93 81 72	ARGE, IN INTERVAEXCEEDANC 5 20%	CFS, FOFAL, IN YEE PROBACTION 10 10%	R INDICAT EARS, AND BILITY, I 25 4% 501 361 264 208 175 145	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI' D ON PERIO FOR INDIO L EXCEEDA  5 20%  290 .042	TY OF INDD OF RECATED RENCE PROB	ISTANTANEC CORD 1934 CCURRENCE SABILITY, 25 4% 519	DUS PEAK 1-49 INTERVAL IN PERCE 50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 	277 222 175 147 128 110 95	CFS, FOFAL, IN YEE PROBACT 10 10%	R INDICAT FARS, AND SILLITY, I 25 4% 501 361 264 208 175 145	ED RECUP O ANNUAL N PERCEN 50 2%	100 1%

205

14333000 MIDDLE FORK ROGUE RIVER NEAR PROSPECT, OR

LOCATION.--Lat 42°44'05", long 122°24'05", in NEtNEt sec.1, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 850 ft downstream from diversion dam and intake of Middle Fork power canal, and 4.5 ml southeast of Prospect.

DRAINAGE AREA .-- 56.5 mi2.

316

367

282

254

230

211

181

161

146

134

129

124

119

112

105

PERIOD OF RECORD.--May 1925 to September 1955 (includes flow of Middle Fork power canal since completion Nov. 19, 1931).

GAGE.--Water-stage recorder. Datum of gage is 2,619 ft National Geodetic Vertical Datum of 1929 (levels by the California-Oregon Power Co.). Prior to Nov. 10, 1949, water-stage recorder and staff gage at various sites and datums within 150 ft of present gage.

REMARKS.--All records given herein include flow In Middle Fork power canal which diverts 850 ft above station for hydroelectric power and returns water to the Rogue River above South Fork Rogue River; practically no storage above diversion dam.

AVERAGE DISCHARGE.--30 years (water years 1926-55), 184 ft3/s, 133,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft<sup>3</sup>/s Nov. 23, 1953, from rating curve extended above 250 ft on basis of shape of previous rating curves; minimum daily, 72 ft<sup>3</sup>/s Aug. 24, to Sept. 5, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 5.65 ft, discharge, 3,230 ft3/s, by measurement of peak flow over dam.

	2 50% 869	.461	10 10 10\$ 1980 DURATIO	25 4% 2790 2790 N TABLE	IN PERCEI	NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	2 50% 666 557 458 385 345 314 289	1020 779 597 415 419 366 3334	1310 940 692 532 462 390 356	R INDICAT EARS AND BILITY, 1 25 4\$ 1730 1160 816 602 513 413 378	ANNUAL	
YEARS, A	2 50% 869	5 20% 	10 10%	25 4\$ 2790	50 2%	NT	(CON- SECU- TIVE DAYS) 	2 50% 666 557 458 385 345 314 289	1020 779 597 475 419 334	1310 940 692 532 462 390	EARS, AND BILITY, 1 25 4% 1730 1160 816 602 513 413	50 2%	100 1%
YEARS, A	2 50% 869	5 20% 	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE DAYS) 	 2 50%  666 557 458 385 345 314	1020 779 597 419 366	10 10 10 10 40 940 692 532 462 390	EARS, AND BILITY, 1 25 4% 1730 1160 816 602 513 413	50 2%	100 1%
YEARS, A	2 50% 869	5 20% 	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE DAYS) 	 2 50%  666 557 458 385 345 314	1020 779 597 419 366	10 10 10 10 40 940 692 532 462 390	EARS, AND BILITY, 1 25 4% 1730 1160 816 602 513 413	50 2%	100 1%
1.25 80%	2 50% 869	5 20% 	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE DAYS) 	2 50%  666 557 458 385 345	1NTERV EXCEEDANG 5 20% 1020 779 597 475 419	10 10% 1310 940 692 532 462	EARS, AND BILITY, I 	ANNUAL N PERCEN 50 2%	100 1%
YEARS, A	2 50% 869	5 20% 	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE DAYS) 	2 50%  666 557 458	1020 779 597	10 10 10 10 13 13 10 940 692	EARS, AND BILITY, 1 	ANNUAL N PERCEN 50 2%	100 1%
YEARS, A	2 50% 869	5 20% 	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE DAYS)	2 50 <b>%</b>  666 557	1020 779	10 10 10% 1310 940	EARS AND BILITY, 1 	ANNUAL N PERCEN 50 2%	100 1%
YEARS, A	2 50% 869	5 20% 	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE DAYS)	2 50 <b>%</b> 	1 NTERV EXCEEDANG 5 20%	AL, ÎN Y CE PROBA 10 10%	EARS, AND BILITY, I 25 4%	ANNUAL N PERCEN 50 2%	100 1%
YEARS, A	AND ANNUÁ 2 50%	L EXCEEDAN 5 20%	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE DAYS)	 2 50 <b>%</b>	INTERVA	AL, ÎN Y CE PROBA 10 10%	EARS, AND BILITY, I 25 4%	ANNUAL N PERCEN 50 2%	100 19
YEARS, A	AND ANNUÁ 2 50%	L EXCEEDAN 5 20%	NCE PROB 10 10%	ABILITY,  25 4%	IN PERCEI	NT  100	(CON- SECU- TIVE	2	INTERVA EXCEEDANG 5	AL, ÎN Y CE PROBA 10	EARS, AND BILITY, I 25	ANNUAL N PERCEN  50	T 
YEARS, A	AND ANNUA	L EXCEEDAN 5	NCE PROB	ABILITY,  25	IN PERCEI	NT  100	(CON- SECU- TIVE	2	INTERVA EXCEEDANG 5	AL, ÎN Y CE PROBA 10	EARS, AND BILITY, I 25	ANNUAL N PERCEN  50	T 
YEARS, A	AND ANNUA	L EXCEEDAN 5	NCE PROB	ABILITY,  25	IN PERCEI	NT  100	(CON- SECU-		INTERV EXCEEDANG	AL, IN Y CE PROBA	EARS, AND BILITY, I	ANNUAL N PERCEN	T 
YEARS, A	ND ANNUÁ	L EXCEEDAN	NCE PROB	ABILITY,	IN PERCE	NT	(CON-		INTERV	AL, ÎN Y	EARS 🗭 AND	ANNUAL	
									INTERV	AL, ÎN Y	EARS 🗭 AND	ANNUAL	
MAGNIT		PROBABILI D ON PERIC				FLOW	<b>MA</b> G				OF ANNUAL ECORD 19		.OW
				33	.17								
ANNUAL	137	250	193			100							
SEPTEMBER	90	168	126	20	.16	5.4							
NUGUST	95	184	135	29 22	.16	7.3 5.8							
JULY	102	263	168	39	.23	7.3	(6)	127	119	112	108		
MAY JUNE	139 114	<b>444</b> <b>4</b> 60	296 270	6 <b>4</b> 82	.22 .30	12.8 11.7	120 183	125 137	110 119	104 112	99		
APRIL	145	357	254	54	.21	11.0	90	122	108	102	97		
MARCH	134	259	189	37	. 19	8.2	60	119	106	100	95		
FEBRUARY	104	451	205	86	.42	8.9	30	116	103	98	94		
JANUARY	104	352	194	65	.33	8.4	14	114	102	96	92		
DECEMBER	112	359	189	73	.39	8.2	7	113	101	95	92		
NOVEMBER	107	270	158	47	.30	6.8	3	112	99	94	90		
OCTOBER	100	192	129	26	.20	5.6	1	111	98	92	88		
	(0/3/	(0,5)	(0/3)	(0/3)	ATTON	KUNOFF	DAYS)	50%	20%	10%	5 <b>%</b> .	2%	1%
10NTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	DEVIA- TION (CFS)	CIENT OF VARI- ATION	OF ANNUAL RUNOFF	(CON- SECU- TIVE	 2	EXCEEDAN 5	CE PROBA  10	BILITY, I	N PERCEI	IT 
				STAN- DARD	COEFFI-	PERCENT	PERIOD	DISCH			R INDICAT		
M(	UNIHLY AN	NO ANNUAL	MEAN DIS	SCHARGES	1933-55		MAG				OF ANNUAL ECORD 19		) <b>W</b>
	ONTHLY AN	ND ANNUAL I	MEAN DIS	SCHARGES	1933-55		MAG				OF ANNUAL ECORD 19		)W

# 14333500 RED BLANKET CREEK NEAR PROSPECT, OR

LOCATION.--Lat 42°46'40", long 122°25'35", in NW±NE± sec.23, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.8 mi downstream from Lick Creek, 3.7 mi northeast of Prospect, and at mile 4.8.

DRAINAGE AREA .-- 45.5 mi2.

PERIOD OF RECORD. -- May 1925 to Saptember 1981.

GAGE.--Water-stage recorder. Altitude of gage is 2,780 ft, from river-profile map. Prior to Sept. 7, 1949, nonrecording gage at several sites within 2.5 mi of present site at various datums.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--56 years (water years 1926-81),  $115 \text{ ft}^3/\text{s}$ , 83,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,190 ft $^3$ /s Dec. 22, 1964, gage height, 7.85 ft, from rating curve extended above 1,500 ft $^3$ /s; minimum observed, 34 ft $^3$ /s Sept. 3, 4, 25, 0ct. 9, 16, 1931.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1926-81

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1935-81

	MINIMUM	MAVIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOR IN YEAR CE PROBAB	S, AND A	NNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	(CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	48	118	70	17	.24	4.9	1	56	47	43	40	37	35
NOVEMBER	51	207	102	39	.39	7.2	3	57	48	43	40	37	35
DECEMBER	54	482	132	78	.59	9.3	7	58	49	45	41	38	36
JANUARY	49	279	133	57	.43	9.4	14	59	50	46	42	39	37
FEBRUARY	54	265	130	45	.34	9.1	30	61	51	47	44	40	38
MARCH	73	354	127	48	.38	8.9	60	63	53	49	45	42	40
APRIL	75	227	146	39	.27	10.3	90	66	55	51	47	44	42
MAY	76	285	178	50	.28	12.5	120	69	58	53	49	46	44
JUNE	59	274	164	60	.37	11.5	183	80	66	60	56	52	49
JULY	49	198	99	34	.34	6.9							
AUGUST	42	117	74	19	.26	5.2							
SEPTEMBER	40	97	66	15	•22	4.7							
ANNUAL	71	177	118	29	.24	100							

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1934-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1934-81

SCHARGE, YEARS, A							PERIOD (CON-		INTERV	I CFS, FO VAL, IN Y	EARS, AN	D ANNUAL	
1 • 25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 <b>4%</b>	50 2%	100
327	560	993	1360	1910	2400	2960							
							1	465	784	1050	1470	1840	2260
WE I GHTED	SKEW =	.215					3	376	608	808	1120	1410	1740
							7	299	447	568	752	913	1100
							15	249	344	413	507	583	664
							30	220	288	331	384	423	461
							60	192	247	281	321	349	377
							90	175	220	247	279	300	320

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1934-81

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
<b>2</b> 45	204	179	160	145	131	113	98	87	77	73	68	64	59	53

### 14334700 SOUTH FORK ROGUE RIVER, SOUTH OF PROSPECT, OR

LOCATION.--Lat 42°42'45", long 122°30'20", in NW\SE\ sec.7, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 200 ft upstream from unnamed tributary, 0.6 mi upstream from Smith Creek, 1.2 mi downstream from Beaver Creek, 2.8 mi southwest of Prospect, and at mile 2.4.

DRAINAGE AREA. -- 246 mi2.

PERIOD OF RECORD. -- October 1968 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 2,030 ft, from topographic map.

REMARKS.--Some regulation by South Fork canal dam upstream. Power diversions above station from South Fork Rogue River, Middle Fork Rogue River, and Red Blanket Creek divert water to Rogue River via Main Canal. During summer base flow all of streamflow is diverted for power except that for fish life. Base flow at station is principally from springs downstream from power diversions.

AVERAGE DISCHARGE.--14 years, 382 ft<sup>3</sup>/s, 276,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,880 ft $^3$ /s Mar. 3, 1972, gage height, 12.71 ft, from floodmark; minimum, 54 ft $^3$ /s Aug. 16-19, 1977; minimum daily, 54 ft $^3$ /s Sept. 24-30, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 20.1 ft, Dec. 22, 1964, from floodmarks at gage, discharge, 28,500 ft<sup>3</sup>/s.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1969-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-82

STAN
DISCHARGE, IN CFS, FOR INDICATED RECURN

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	65	175	105	32	.30	2.3	1	75	60	54	49		
NOVEMBER	69	761	264	191	•72	5.7	3	76	61	54	50		
DECEMBER	86	1327	475	390	.82	10.3	7	77	61	55	50		
JANUARY	85	1143	628	344	•55	13.6	14	78	62	56	51		
FEBRUARY	81	1246	473	292	.62	10.3	30	82	65	58	53		
MARCH	99	2240	572	531	.93	12.4	60	88	70	62	57		
APRIL	134	878	486	226	.47	10.5	90	92	72	64	58		
MAY	253	1049	655	284	.43	14.2	120	97	76	68	62		
JUNE	150	962	506	310	.61	11.0	183	141	110	99	92		
JULY	71	429	211	133	.63	4.6							
AUGUST	61	243	124	57	.46	2.7							
SEPTEMBER	59	174	112	40	.36	2.4							
ANNUAL	114	672	384	171	.45	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1969-82

				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	'AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 <b>4%</b>	50 <b>2%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
1530	2880	5390	7460	10500									
							1	2490	4660	6260	8370		
VE I GHTED	SKEW =	029					3	2150	3780	4900	6270		
							7	1740	2840	3510	4280		
							15	1290	2020	2480	3000		
							30	981	1520	1850	2220		
							60	755	1130	1340	1570		
							90	677	1020	1220	1430		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1969-82

 		DISCH	ARGE, IN	CFS, W	HICH WAS	EQUALED	OR EXCEE	ED FOR	INDICATED	PERCENT	OF TIME			
 5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95 <b>%</b>
1110	840	706	609	526	447	326	234	166	126	112	100	88	76	65

## 14335000 ROGUE RIVER BELOW SOUTH FORK ROGUE RIVER, NEAR PROSPECT, OR

LOCATION.--Lat 42°42'00", long 122°35'40", in SW±NW± sec.16, T.33 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on left bank 130 ft upstream from highway bridge, 0.5 mi downstream from Cascade Gorge, 3.1 mi downstream from South Fork Rogue River, 6.6 mi southwest of Prospect, and at mile 160.4 (river-profile survey).

DRAINAGE AREA .-- 650 mi2.

PERIOD OF RECORD.--October 1928 to September 1965. Prior to May 1929 monthly discharge only, published in WSP 1318.

GAGE.--Staff gage. Datum of gage is 1,707.57 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to June 23, 1961, water-stage recorder at sites 195 ft downstream; prior to Aug. 31, 1957, water-stage recorder at datum 0.69 ft higher and Aug. 31, 1957 to June 22, 1961, water-stage recorder at datum 0.31 ft lower.

REMARKS.--Considerable diurnal fluctuation caused by powerplant 5.5 mi above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 1,799 ft3/s, 1,302,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 23.0 ft, from floodmark, from rating curve extended above 18,000 ft<sup>3</sup>/s by logarithmic plotting; minimum since intake was lowered Aug. 18, 1934, 493 ft<sup>3</sup>/s Sept. 1, 1934 (prior to Aug. 18, 1934, minimum not determined).

STATISTICAL SUMMARIES

STAN-	STAN-   DARD   COEFFI - PERCENT   PERCENT   FOR INDICATED RECURRENCE   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PERCENT   PER	80 <b>%</b> 5520		.286	DURATIO	N TABLE	OF DAILY !		3 7 15 30 60 90 FOR PERIOD	5590 4490 3780 3370 3010 2780 OF RECO	8920 6670 5200 4400 3840 3460 	11900 8580 6290 5090 4360 3860	16800 11600 7870 5980 4970 4310	21500 14500 9190 6650 5 <b>42</b> 0	
STAN-	STAN-	80 <b>%</b> 5520						 MEAN FLOW	3 7 15 30 60 90	5590 4490 3780 3370 3010 2780	8920 6670 5200 4400 3840 3460	11900 8580 6290 5090 4360 3860	16800 11600 7870 5980 4970	21500 14500 9190 6650 5 <b>42</b> 0	
STAN-	STAN-	80%  5520			16200 2		5400	 	3 7 15 30 60	5590 4490 3780 3370 3010	8920 6670 5200 4400 3840	11900 8580 6290 5090 <b>43</b> 60	16800 11600 7870 5980 4970	21500 14500 9190 6650 5 <b>42</b> 0	
STAN-	STAN-	80%  5520			16200 2	1200 2	5400		3 7 15 30	5590 4490 3780 3370	8920 6670 5200 4400	11900 8580 6290 5090	16800 11600 7870 5980	21500 14500 9190 6650	
STAN-	STAN-	80%  5520			16200 2	21200 2	5400		3 7 15	5590 4490 3780	8920 6670 5200	11900 8580 6290	16800 11600 7870	21500 14500 9190	
STAN-	STAN-	80%  5520			16200 2	21200 2	5400		<b>3</b> 7	5590 4490	8920 6670	11900 8580	16800 11600	21500 14500	
BASED ON PERIOD OF RECORD   1930-65	BASED ON PERIOD OF RECORD   1930-65	80%  5520			16200 2	1200 2	5400		3	5590	8920	11900	16800	21500	
STAN-	BASED ON PERIOD OF RECORD   1930-65	80%  5520			16200 2	1200 2	5400								
STAN-	BASED ON PERIOD OF RECORD   1930-65	80%	8250	12800	16200 2	1200 2	5400		1	6720	11300	15600	23100	30500	
STAN-	STAN-	80%													
STAN	STAN-								DATSI	JUB			٦ <i>p</i> 	2,6	
STAN-	STAN-		JU}s -	ZU76	1∪76	4%	27b	1/0			-				
STAN-	STAN-										 5	10	2F	 E0	100
STAN-	STAN-	1EANS, /							(CON-						İТ
STAN-	STAN-								DEDLOR	DISCH					RENCE
STAN-   DARD   COEFFI-   PERCENT   DARD   COEFFI-   PERCENT   DARD   COEFFI-   PERCENT   DARD   COEFFI-   PERCENT   DARD   COEFFI-   PERCENT   DARD   COEFFI-   PERCENT   DEVIA-   CIENT   OF   CON-   EXCEEDANCE   PROBABILITY, IN PERCENT   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS   DAYS	STAN-	MAGNI						FLOW	MAG						.0 <b>W</b>
STAN-	STAN-		950	2990	1/9/	422	• 2 3	100							
STAN-	STAN-														
STAN-	STAN-														
STAN-	STAN-														
STAN-	STAN-								183	1180	963	864	790	713	
STAN-	STAN-														
STAN-	STAN-														
STAN-	STAN-			3949				9.5							
STAN-   DISCHARGE, IN CFS, FOR INDICATED RECURRENCE   DARD   COEFFI- PERCENT   PERIOD   INTERVAL, IN YEARS, AND ANNUAL NON-   EXCEEDANCE PROBABILITY, IN PERCENT   PERCENT   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION   EVALUATION	STAN-			4788	2111	907	.43		30		808				
STAN-	STAN-	JANUARY	809	4448	1921	938	.49	8.9	14	927	792	726	674	618	
STAN-   DISCHARGE, IN CFS, FOR INDICATED RECURRENCE	STAN-   DISCHARGE, IN CFS, FOR INDICATED RECURRENCE	DECEMBER	782	7361	2008	1320	.66	9.3	7	913	780	715	665	611	
STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE  DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON- DEVIA- CIENT OF OF (CON- MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU- ONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 2 5 10 20 50 100 DAYS) 50% 20% 10% 5% 2% 1%	STAN- DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON- DEVIA- CIENT OF OF (CON- MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU- MONTH (CFS) (CFS) (CFS) ATION RUNOFF TIVE 2 5 10 20 50 100 DAYS) 50% 20% 10% 5% 2% 1%														
STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE  DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-  DEVIA- CIENT OF CON- EXCEEDANCE PROBABILITY, IN PERCENT  MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU	STAN- DISCHARGE, IN CFS, FOR INDICATED RECURRENCE DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON- DEVIA- CIENT OF OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU	OCTOBER	680	1897	1055	 255	. 24	4.9	1	878	749	689	643	· 595	
BASED ON PERIOD OF RECORD 1930-65  STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE  DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-  DEVIA- CIENT OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT  MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU	BASED ON PERIOD OF RECORD 1930-65  STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE  DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-  DEVIA- CIENT OF OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT  MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU	.57771	(0, 0)	(0,0)	(0,0)	(0,0)	7,1151	NONO! !		-	-				
BASED ON PERIOD OF RECORD 1930-65  STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE  DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-  DEVIA- CIENT OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT	BASED ON PERIOD OF RECORD 1930-65  STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE  DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-  DEVIA- CIENT OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT	MONTH								2	 5	10	20	50	100
BASED ON PERIOD OF RECORD 1930-65  STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE	BASED ON PERIOD OF RECORD 1930-65  STAN- DISCHARGE, IN CFS, FOR INDICATED RECURRENCE										EXCEEDA	NCE PROB	ABILITY,	IN PERCEI	١T
BASED ON PERIOD OF RECORD 1930-65	BASED ON PERIOD OF RECORD 1930-65						COEFF1-	PERCENT	PERIOD	5					
						STAN-				DISCI	HARGE. II	N CES. E	OR INDIC	ATED RECUI	RENCE

### 14335500 SOUTH FORK BIG BUTTE CREEK NEAR BUTTE FALLS, OR

LOCATION.--Lat 42°32°25", long 122°33'15", in NE‡SW‡ sec.11, T.35 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 10 ft downstream from Ginger Creek, 0.6 mi east of town of Butte Falls, and at mile 14.0.

DRAINAGE AREA .-- 138 mi2.

PERIOD OF RECORD.--September 1910 to October 1911 (published as "at Butte Falls"), August to October 1915, October 1917 to September 1922, March 1925 to September 1982. Monthly discharge only August, September 1915, published in WSP 1318.

GAGE.--Water-stage recorder. Concrete control since Oct. 1, 1968. Altitude of gage is 2,360 ft, from river-profile map. Sept. 21, 1910, to Sept. 30, 1922, nonrecording gage at site 300 ft upstream at different datums.

REMARKS.--Flow slightly regulated since 1952 by Willow Creek Reservoir, capacity, 7,320 acre-ft. Diversions for irrigation above station and for municipal water supply for Medford (since 1927) and Butte Falls.

AVERAGE DISCHARGE.--63 years (water years 1911, 1918-22, 1926-82), 155 ft<sup>3</sup>/s, 112,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discherge, 12,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 7.65 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 29 ft<sup>3</sup>/s Sept. 26, 1981.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1928-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1929-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	-NC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	44	127	 78	19	.24	4.3	1	65	52	45	40	34	31
NOVEMBER	49	218	100	34	.34	5.5	3	66	52	45	40	35	31
DECEMBER	60	1073	182	165	.91	10.0	7	67	<b>5</b> 3	47	41	36	33
JANUARY	54	785	214	149	.70	11.8	14	68	55	48	43	38	34
FEBRUARY	59	532	221	118	.53	12.2	30	70	57	51	46	41	38
MARCH	67	740	240	126	.53	13.2	60	72	60	54	49	44	41
APRIL	73	435	229	89	.39	12.6	90	74	62	<b>5</b> 6	52	47	45
MAY	71	333	184	6 <b>9</b>	. 38	10.1	120	76	64	58	54	49	47
JUNE	53	287	125	48	.38	6.9	183	84	69	63	58	53	50
JULY	52	134	89	19	.22	4.9							
AUGUST	46	127	80	16	.20	4.4							
SEPTEMBER	45	106	77	14	. 18	4.2							
ANNUAL	64	297	151	52	.35	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1911-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1928-82

SCHARGE, YEARS, A							PERIOD (CON-		IARGE, IN INTERV EXCEEDAN	AL, IN Y	EARS, AN	D ANNUAL	•
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
415	757	1510	2250	3530	4800	6400							
							1	624	1190	1720	2600	3430	4450
WEIGHTED	SKEW =	.480					3	533	974	1380	2040	2660	3410
							7	446	76 <b>9</b>	1040	1470	1850	2290
							15	373	601	777	1030	1230	1460
							30	319	492	616	781	910	1040
							60	271	408	504	628	723	820
							90	249	367	447	547	621	695

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1928-82

		DISC	HARGE, I	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATE	D PERCEN	NT OF TH	ΜE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
367	291	243	209	182	158	124	105	93	83	78	74	70	65	59

### 14337500 BIG BUTTE CREEK NEAR MCLEOD, OR

LOCATION.--Lat 42°39'05", long 122°41'25", in NE±NW± sec.3, T.34 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 225 ft upstream from county road bridge, 0.9 mi south of McLeod, and at mile 0.64.

DRAINAGE AREA .-- 245 mi2.

PERIOD OF RECORD. -- October 1945 to September 1957. October 1967 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,525.95 ft National Geodetic Vertical Datum of 1929. Oct. 9, 1945, to Sept. 30, 1957, nonrecording gage at site 260 ft downstream at datum 0.53 ft higher.

REMARKS.--Slight regulation by fish hatchery 600 ft above station. Several diversions in the vicinity of Butte Falls, the two largest being the city of Medford diversion and Eagle Point Irrigation District Canal.

AVERAGE DISCHARGE. -- 27 years, 283 ft3/s, 205,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,950 ft $^3$ /s Dec. 22, 1955, gage height, 12.75 ft, site and datum then in use, from rating curve extended above 3,300 ft $^3$ /s on basis of slope-area measurement of peak flow; minimum, 6.4 ft $^3$ /s June 23, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.——Flood of Dec. 22, 1964, reached a stage of 18.6 ft, present site, from floodmark by İocal resident, discharge, 16,800 ft³/s, from rating curve, at former site, extended above 9,000 ft³/s and field estimate of overflow.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1946-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2%	100 1%
OCTOBER	65	330	133	 55	.41	3.9	1	60	41	32	25	18	
NOVEMBER	66	535	217	1 <i>2</i> 6	.58	6.4	3	59	43	36	31	25	
DECEMBER	58	1334	440	325	.74	12.9	7	60	45	39	34	<b>2</b> 9	
JANUARY	64	1325	552	342	.62	16.2	14	61	47	40	35	31	
FEBRUARY	92	1121	512	274	.54	15.0	30	63	48	42	37	32	
MARCH	126	1362	535	311	•58	15.7	60	66	51	45	40	35	
APRIL	74	723	396	175	.44	11.6	90	71	55	47	42	37	
MAY	57	492	249	122	-49	7.3	120	80	61	52	46	39	
JUNE	44	450	145	85	.59	4.3	183	99	74	64	57	50	
JULY	37	148	85	30	.35	2.5							
AUGUST	43	121	71	22	.31	2.1							
SEPTEMBER	44	106	72	17	.24	2.1							
ANNUAL	80	501	283	115	.41	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1946-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-82

					CE INTER		PERIOD (CON-		INTERV	AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4 <b>%</b> 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
1780	3150	5300	6830	8800	10300								
							1	2250	3890	4950	6200	7060	
WEIGHTED	SKEW =	334					3	1770	2960	3660	4440	4930	
							7	1360	2160	2610	3070	3350	
							15	1000	1550	1850	2160	2350	
							30	781	1190	1410	1660	1810	
							60	634	962	1150	1340	1460	
							90	584	878	1040	1200	1290	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-82

 		DISCH	ARGE, IN	CFS, WH	IICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
867	632	510	427	359	296	207	158	123	93	83	75	67	59	49

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1967-76

### 14337600 ROGUE RIVER NEAR MCLEOD, OR

LOCATION.--Lat 42°39'20", long 122°42'50", in SW½ sec.33, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on left bank at Obstinate J Ranch, 1.3 mi downstream from Big Butte Creek, 1.6 mi southwest of McLeod, and at mile 154.0.

DRAINAGE AREA .-- 938 mi2.

PERIOD OF RECORD. -- October 1965 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,489.08 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake. Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--17 years, 2,100 ft<sup>3</sup>/s, 1,521,000 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1966-76

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,000 ft³/s Mar. 3, 1972, gage height, 12.24 ft; minimum, 468 ft³/s Feb. 18, 1977, result of closure of Lost Creek Dam, minimum prior to that time, 604 ft³/s Sept. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1928, 20.35 ft Dec. 22, 1964, from floodmarks, discharge, 74,300 ft<sup>3</sup>/s from slope-area measurement of peak flow.

## STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100
OCTOBER	917	1508	1229	179	.15	4.5	1	1030	893	830	781		
NOVEMBER	1038	3932	1848	836	. 45	6.7	3	1040	903	838	788		
ECEMBER	1127	4293	2333	953	.41	8.5	7	1060	914	847	795		
ANUARY	1434	5290	3429	1472	.43	12.5	14	1080	930	859	805		
EBRUARY	1523	4586	2720	833	.31	9.9	30	1100	943	874	822		
ARCH	1941	8565	3301	1926	.58	12.0	60	1130	973	902	848		
PRIL	1603	4240	2861	884	.31	10.4	90	1150	993	918	860		
1AY	1574	4503	3270	946	. 29	11.9	120	1180	1010	935	878		
UNE	1164	4025	2555	1037	.41	9.3	183	1380	1160	1070	1000		
ULY	903	2196	1577	445	. 28	5.7							
UGUST	887	1618	1255	274	•22	4.6							
EPTEMBER	843	1473	1162	217	• 19	4.2							
NNUAL	1377	3340	2294	652	•28	100							
OISCHARGE	BASE , IN CFS,	D ON PERI	OD OF RE	CORD 196	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU-	BASE	HARGE, IN	RIOD OF R	OF ANNUAL ECORD 19 R INDICAT EARS, AND	66-76 ED RECUR	RENCI
80%	50 <b>%</b>	20 <b>%</b> 	10%	4% 	2 <b>%</b> 	100 1% 	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100
7300	11700	19100 2	24900				1	9450	16000	21600			
	D SKEW =	.171					•						
WE KERLE	D SVEW ≖	- 1 / 1					3	8060	13400	18200			-

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-76

15 30

60

6670

5370

4370

3670

3360

10300

7760

5990

4900

4480

13300

9580

7190

5810

5280

 		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	4E		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
 4760	4010	3520	3140	2850	2590	2160	1820	1570	1390	1320	1220	1120	1050	977

### 14338000 ELK CREEK NEAR TRAIL. OR

LOCATION.--Lat 42°39'50", long 122°44'50", in SW\u00e4 sec.30, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 3.3 mi northeast of Trail and at mile 0.4.

DRAINAGE AREA .-- 133 mi2.

PERIOD OF RECORD. --October 1945 to September 1982. Prior to March 1946 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,456.56 ft National Geodetic Vertical Datum of 1929. Prior to July 5, 1946, nonrecording gage at various sites within 1.0 mi of present site at different datums. July 5, 1946, to June 22, 1950, nonrecording gage, and June 23, 1950, to May 23, 1954, water-stage recorder, at site 0.3 mi upstream at datum 12.14 ft higher.

REMARKS. -- No regulation. Diversions for Irrigation above station.

AVERAGE DISCHARGE. -- 37 years, 230 ft3/s, 166,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.84 ft, from rating curve extended above 4,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.40 ft<sup>3</sup>/s Aug. 16, 1965.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1947-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1948-82

			M54	STAN- DARD DEVIA-	CIENT OF	PERCENT	PERIOD (CON-	11	NTERVAL, KCEEDANCI	CFS, FOR IN YEARS E PROBABI	, AND AN LITY, IN	INUAL NO	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	3.2	404	38	69	1.83	1.4	1	2.4	1.5	1.2	1.0	.9	
NOVEMBER	9.1	1008	193	196	1.02	7.0	3	2.7	1.7	1.4	1.1	.9	
DECEMBER	13	1851	457	408	•89	16.5	7	2.9	1.9	1.5	1.3	1.0	
JANUARY	20	1283	567	391	•69	20.5	14	3.3	2.1	1.7	1.4	1.1	
EBRUARY	23	1131	519	255	.49	18.8	30	3.9	2.5	2.0	1.7	1.4	
ARCH	121	1074	439	248	. 56	15.9	60	5.1	3.4	2.8	2.3	1.9	
PRIL	66	565	297	125	.42	10.7	90	6.4	4.6	4.0	3.5	3.1	
ΙΑΥ	38	358	169	91	.54	6.1	120	9.2	6.8	5.9	5.2	4.6	
UNE	15	254	57	43	•75	2.1	183	25	17	14	12	11	
ULY	3.7	36	15	7.7	.53	•5							
UGUST	1.4	25	6.7	4.6	.68	.2							
EPTEMBER	1.5	25	7.1	4.2	.60	• 3							
NNUAL	42	438	229	92	.40	100							
MAGNI		PROBABILI				-LDW	MAG	NITUDE AI		BILITY OF			OW

DISCHARGE, YEARS, A					CE INTER		PERIOD (CON-		INTERV	/AL, ÍN Y	EARS, AN	TED RECUI ID ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
3240	5200	8350	10700	13900	16500		=						
							1	3880	60 <b>60</b>	7160	8210	8780	
WE IGHTED	SKEW =	003					3	2630	4240	5180	6200	6850	
							7	1720	2710	3290	3940	4370	
							15	1180	1730	2020	2310	2480	
							30	883	1270	1480	1690	1810	
							60	692	978	1120	1260	1350	
							90	601	836	955	1070	1140	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1947-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	D PERCE	NT OF TIM	IE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
910	581	432	340	270	215	132	70	34	17	13	9.4	6.8	5.0	3.5

## 14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR

LOCATION.--Lat 42°31'30", long 122°50'30", in SEt sec.17, T.35 S., R.1 W., Jackson County, Hydrologic Unit 17100307, on right bank 50 ft upstream from Dodge Bridge, 0.7 mi downstream from Reese Creek, 4.3 mi northwest of Eagle Point, and at mile 138.61.

DRAINAGE AREA .-- 1,215 mi2.

5920

4700

4120

3710

3360

3050

2500

2010

1660

1430

1350

1090

PERIOD OF RECORD. -- October 1938 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,271.39 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1938, nonrecording gage, Dec. 21, 1938, to Aug. 15, 1968, water-stage recorder, at datum 2.27 ft higher, Aug. 16, 1968, to Sept. 30, 1976, water-stage recorder, at datum 1.00 ft higher.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake. Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--44 years, 2,597 ft<sup>3</sup>/s, 1,882,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.78 ft, datum then in use, from rating curve extended above 23,000 ft<sup>3</sup>/s; minimum, 567 ft<sup>3</sup>/s Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time 611 ft<sup>3</sup>/s Aug. 6, 14, 29, Sept. 9, 1940.

											OF AMAIL		OW
М	ONTHLY AN	ND ANNUAL	MEAN DIS	SCHARGES	1939-76		MA			BABILITY RIOD OF	RECORD		
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISC	INTERVA	, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 19
OCTOBER	934	3099	1354	399	.29	4.2	1	1070	937	875	827	. 777	<b></b>
NOVEMBER	1012	5719	2151	1007	.47	6.7	3	1080	949	886	838	787	
DECEMBER	1164	11290	3479	2228	.64	10.8	7	1090	957	894	845	793	_
JANUARY	1489	8151	4021	2124	.53	12.5	14	1100	968	905	856	805	_
EBRUARY	1798	8382	3922	1383	.35	12.2	30	1120	983	919	869	818	_
MARCH	1784	9610	3676	1523	.41	11.4	60	1150	1010	945	896	844	-
APRIL	1689	5220	3476	833	.24	10.8	90	1190	1040	969	916	860	
YAN	1595	5287	3484	921	.26	10.8	120	1230	1070	1000	943	885	
JUNE	1201	4534	2629	881	.34	8.2	183	1490	1260	1150	1080	1000	-
JULY	928	2431	1557	382	.25	4.8							
AUGUST	888	1711	1254	244	.19	3.9							
SEPTEMBER	853	1535	1177	189	.16	3.7							
SEF TEMBER	0))												
ANNUAL	1568 TUDE AND				.26  EOUS PEAK	100  FLOW	 MA					 AL HIGH FI 1939-76	LDW
MAGNIT MAGNIT DISCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE	EOUS PEAK 19-76 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON-	BASE	HARGE, IN	RIOD OF F	RECORD  OR INDICATE  YEARS, AN		RRENCI
MAGNIT DISCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 59-76 E INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU-	BASE DISCE	ARGE, INTERN	N CFS, FO	RECORD OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE OR INDICATE	1939-76 ATED RECUI ND ANNUAL IN PERCEI	RRENCI
MAGNIT	1568 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE	EOUS PEAK 19-76 E INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON-	BASE	HARGE, IN	RIOD OF F	RECORD  OR INDICATE  YEARS, AN	1939-76  ATED RECUIND ANNUAL	RRENC
MAGNIT	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 59-76 E INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE	DISCH	HARGE, IN INTERN EXCEEDAN	RIOD OF F N CFS, FC /AL, IN N NCE PROB/	RECORD  OR INDICA YEARS, AN ABILITY,  25	1939-76 ATED RECUIND ANNUAL IN PERCEI	RRENC
MAGNITUSCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	RIOD OF F N CFS, F( NAL, IN N NCE PROB/ 10%	OR INDICATE ARS, AN ABILITY,	1939-76  ATED RECUI ND ANNUAL IN PERCEI  50 2%	RRENC
MAGNITUSCHARGE, YEARS, A	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	N CFS, FC VAL, IN N NCE PROBA	RECORD  OR INDIC/ YEARS, AN ABILITY,  25 4%	ATED RECUI ND ANNUAL IN PERCEI 50 2%	RRENC
MAGNITONISCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 16000 12400 9050	HARGE, IN INTERV EXCEEDAN 5 20% 26700 20400 14200	10 OF F	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4% 47500 36300 24200	1939-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  57900 44400 29300	RRENC
MAGNITUSCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	10 OF F	RECORD  OR INDIC/ YEARS, AN ABILITY,  25 4%  47500 36300	1939-76  ATED RECUI ND ANNUAL IN PERCEI  50 2%  57900 44400	RRENC
MAGNITUSCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH 2 50% 16000 12400 9050 6820 5470	ARGE, IN INTER EXCEEDAN 5 20% 26700 204200 14200 7580	10 10% 35200 26800 18300 9150	RECORD  OR INDIC/ (EARS, AI  BILITY,  25  47500 36300 24200 15700 11300	1939-76  ATED RECUIND ANNUAL IN PERCEITS  50 2%  57900 44400 29300 18400 13100	RRENC
MAGNITUSCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 16000 12400 9050 6820	HARGE, IN INTERVEXCEEDAN 5 20% 26700 20400 14200 10000	10 OF F	AF500 36300 24200 15700	1939-76  ATED RECUIND ANNUAL IN PERCEI  50 2\$  57900 44400 29300 18400	100 11:
MAGNITO	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY,	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH 2 50% 16000 12400 9050 6820 5470	ARGE, IN INTER EXCEEDAN 5 20% 26700 204200 14200 7580	10 10% 35200 26800 18300 9150	RECORD  OR INDIC/ (EARS, AI  BILITY,  25  47500 36300 24200 15700 11300	1939-76  ATED RECUIND ANNUAL IN PERCEITS  50 2%  57900 44400 29300 18400 13100	RRENCI
MAGNITUSCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 193 CURRENCE IABILITY, 25 4%	EOUS PEAK 19-76 E INTERVAL IN PERCE 50 2%	FLOW  , IN NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 16000 12400 9050 6820 5470 4620 4270	ARGE, INTERNEXCEEDAN  26700 20400 14200 10000 7580 6180 5600	35200 26800 112400 9150 7310 6500	25 4% 47500 36300 24200 11300 8850	1939-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  57900 44400 29300 18400 13100 10100	100 11:
MAGNITUSCHARGE, YEARS, A	1568 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILID ON PERI FOR INDI LEXCEEDA 5 20% 35300 4	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 193 CURRENCE ABILITY, 25 4% 4900 8	EOUS PEAK 19-76  E INTERVAL IN PERCE 50 2%  60300	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  16000 12400 9050 6820 5470 4620 4270 OF RECC	ARGE, IN INTERN EXCEEDAN 20400 14200 10000 7580 6180 1939-	35200 26800 10% 35200 26800 12400 9150 7310 6500	25 47500 36300 15700 11300 8850 7680	1939-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  57900 44400 29300 18400 13100 10100	100 11;

# 14339500 SOUTH FORK LITTLE BUTTE CREEK AT BIG ELK RANGER STATION, OR

LOCATION.--Lat 42°20'40", long 122°21'30", in NW½ sec.21, T.37 S., R.4 E., Jackson County, Hydrologic Unit 17100307, 1.0 mi south of Big Elk ranger station, 2.5 mi upstream from Big Draw Creek, and 15 mi southeast of Lake Creek Post Office.

DRAINAGE AREA .-- About 17 mi2.

PERIOD OF RECORD.--October 1926 to September 1950.

GAGE.--Water-stage recorder. Altitude of gage is 4,660 ft, by barometer. Prior to Oct. 28, 1942, water-stage recorder 600 ft downstream at same datum.

REMARKS.--No diversion or regulation above station.

COOPERATION.---Records for 1932-50, furnished by the Oregon Water Resources Department.

AVERAGE DISCHARGE.--24 years, 17.9 ft<sup>3</sup>/s, 12,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 145 ft<sup>3</sup>/s May 25, 1942, gage height, 2.80 ft, from rating curve extended above 25 ft<sup>3</sup>/s; minimum recorded, 4 ft<sup>3</sup>/s July 8-15, 1931.

									ON PERI				
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	- 1	NTERVAL,	CFS, FOR IN YEARS E PROBAB	S, AND A	NNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.9	13	9.7	1.8	.18	4.6	1	7.4	5.8	5.0	4.4		
NOVEMBER	6.2	14	9.9	2.1	.21	4.6	3	7.5	5.8	5.1	4.5		
DECEMBER	6.3	16	10	2.6	. 25	4.7	7	7.6	6.0	5.2	4.6		
JANUARY	6.0	17	9.8	2.9	.30	4.6	14	7.7	6.1	5.4	4.9		
FEBRUARY	6.0	21	11	3.3	•30	5.1	30	8.0	6.5	5.8	5.2		
MARCH	7.6	34	15	6.2	.41	7.1	60	8.5	6.9	6.2	5.6		
APRIL	11	63	31	14	.44	14.5	90	8.8	7.2	6.4	5.8		
MAY	8.1	88	53	25	. 47	24.8	120	9.2	7.4	6.5	5.8		
JUNE	5.3	78	28	17	.61	13.1	183	9.7	8.0	7.2	6.5		
JULY	4.7	21	14	4.2	.30	6.6							
AUGUST	5.5	17	12	3.0	. 26	5.5							
SEPTEMBER	5.0	15	11	2.4	.22	5.0							
				_									
ANNUAL	6.6	26	18	5.0	.28	100							
YEARS,		FOR INDIC	CATED RE	LIDDENCE									
1.25				ABILITY,	IN PERCE	NT	PERIOD (CON-		INTERVA	CFS, FOR L, IN YEA	ARS, AND	ANNUAL	
80%	2 50%	5 20%	10 10%		IN PERCE				INTERVA	L, IN YE	ARS, AND	ANNUAL	
		5	10	ABILITY, 25	IN PERCE 50	NT  100	(CON- SECU- TIVE	E	I NTERVA XCEEDANC	L, IN YEA E PROBABI	ARS, AND ILITY, IN 25	ANNUAL N PERCEN 50	T 100
80%	50%	5 20%	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE	E	I NTERVA XCEEDANC	L, IN YEA E PROBABI	ARS, AND ILITY, IN 25	ANNUAL N PERCEN 50	100
80 <b>%</b> 70	50%	5 20% 124	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS)	2 50%	I NTERVA XCEEDANC 5 20%	L, IN YE/ E PROBABI 10 10%	ARS, AND ILITY, IN 25 4%	ANNUAL N PERCEN 50 2%	100
80 <b>%</b> 70	50 <b>%</b> 95	5 20% 124	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS)	2 50% 80	INTERVA XCEEDANC 5 20%	L, IN YE/ E PROBABI 10 10%	ARS, AND ILITY, IN 25 4%	ANNUAL N PERCEN 50 2%	T 100
80 <b>%</b> 70	50 <b>%</b> 95	5 20% 124	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS)	2 50% 80 77	INTERVA XCEEDANCI 5 20% 116 113	10 10% 131 127	ARS, AND ILITY, IN 25 4% 144 139	ANNUAL N PERCEN 50 2%	100 1%
80 <b>%</b> 70	50 <b>%</b> 95	5 20% 124	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS) 	2 50% 80 77 75	1 NTERVA XCEEDANCI 5 20% 116 113 107	10 10% 131 127	ARS, AND ILITY, IN 25 4% 	ANNUAL N PERCEN 50 2%	100
80% 70	50 <b>%</b> 95	5 20% 124	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS) 	2 50% 80 77 75 71 63	1 NTERVA XCEEDANCI  5 20%  116 113 107 101 89	10 10% 131 127 120 112 99	ARS, AND ILITY, IN 25 4% 139 130 121 107	ANNUAL N PERCEN 50 2%	100
80 <b>%</b> 70	50 <b>%</b> 95	5 20% 124	10 10%	25 4%	IN PERCE 50	NT  100	(CON- SECU- TIVE DAYS) 	2 50% 80 77 75 71	1 NTERVA XCEEDANCI 5 20% 116 113 107 101	10 10 10% 131 127 120 112	ARS, AND ILITY, IN 25 4% 144 139 130 121	ANNUAL N PERCEN 50 2%	100 1%
80 <b>%</b> 70	50 <b>%</b> 95	5 20% 124	10 10%	25 4% 160	1N PERCE 50 2%	NT100	(CON- SECU- TIVE DAYS) 	2 50% 80 77 75 71 63 49	1 NTERVA XCEEDANCI 5 20% 	131 127 120 112 99 74 59	144 139 130 121 107 79	ANNUAL N PERCEN 50 2%	100
80 <b>%</b> 70	50 <b>%</b> 95	5 20% 124 418	10 10 10 10 10 10 10 10 10 10 10 10 10 1	25 4% 160	IN PERCE 50 2%	NT100	(CON- SECU- TIVE DAYS) 	2 50% 80 77 75 71 63 49 40 0F RECOR	1NTERVA XCEEDANC 5 20% 116 113 107 101 89 68 53	10 10 10% 127 120 112 99 74 59	144 139 130 121 107 79 62	ANNUAL N PERCEN 50 2%	100
80 <b>%</b> 70	50 <b>%</b> 95	5 20% 124 418	10 10 10 10 10 10 10 10 10 10 10 10 10 1	25 4% 160	IN PERCE 50 2% OF DAILY	NT 100 1% 	(CON- SECU- TIVE DAYS) 	2 50% 80 77 75 71 63 49 40 0F RECOR	1NTERVA XCEEDANC 5 20% 116 113 107 101 89 68 53	10 10 10% 127 120 112 99 74 59	144 139 130 121 107 79 62	ANNUAL N PERCEN 50 2%	100 1%
80% 70 WEIGHTEI	95 O SKEW =	5 20% 124 418	10 10 10 10 10 10 10 10 10 10 10 10 10 1	ABILITY, 25 4% 160  N TABLE (	IN PERCE 50 2% OF DAILY	NT 100 1%	(CON- SECU- TIVE DAYS) 	2 50% 80 77 75 71 63 49 40 0F RECOR	1NTERVA XCEEDANC 5 20% 	131 127 120 110 127 120 112 99 74 59	ARS, AND ILITY, IN 25 4% 144 139 130 121 107 79 62	ANNUAL N PERCEN' 50 2%	100

#### 14341500 SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK. OR

LOCATION.--Lat 42°24'30", long 122°36'00", in SEt sec.29, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on left bank 0.5 mi upstream from intake of Rogue River Valley Canal, 1.4 mi southeast of Lakecreek, and at mile 18.1.

DRAINAGE AREA .-- 138 mi2.

PERIOD OF RECORD. -- April 1921 to September 1932.

GAGE.--Water-stage recorder. Altitude of gage is 1,725 ft, by barometer. Supplementary nonrecording gage at site 25 ft upstream used Jan. 12 to Sept. 6, 1965. Apr. 15 to June 17, 1921, nonrecording gage, and June 18, 1921, to Sept. 6, 1965, water-stage recorder at site 75 ft upstream at datum 4.97 ft higher.

REMARKS.--No regulation. Diversions for irrigation above station; also, in December 1958 Dead Indian collection canal began diverting above station from Code Creek and Dead Indian Creek and in December 1959 South Fork Little Butte collection canal began diverting above station from South Fork Little Butte Creek, Daley Creek, and Beaver Dam Creek. These are transbasin diversions to Howard Prairie Reservoir in Klamath River basin, but eventually this water is diverted back to Rogue River basin for irrigation of lands in the Ashland-Madford area and power development enroute.

AVERAGE DISCHARGE.--61 years (water years 1922-82), 104 ft3/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,660 ft $^3$ /s Dec. 2, 1962, gage height, 8.35 ft, site and datum then in use; minimum, 2.0 ft $^3$ /s Aug. 10, 1931.

# STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF THE TWO COLLECTION CANALS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1922-57

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1923-57

	MINIMUM	MANIMIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		ARGE, IN O INTERVAL, EXCEEDANCI	IN YEARS	, AND AN	INUAL NO	N-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5% -	50 2%	100 1%
OCTOBER	14	85	 25	15	•59	1.9	1	13	9.0	6.9	5.4	4.0	
NOVEMBER	14	177	54	41	.77	4.1	3	14	9.5	7.3	5.7	4.1	
DECEMBER	19	405	117	111	.95	9.0	7	15	10.0	7.7	5.9	4.3	
JANUARY	19	380	127	99	•78	9.8	14	15	11	8.3	6.5	4.8	
FEBRUARY	27	345	157	95	.61	12.1	30	16	11	8.8	6.9	5.1	
MARCH	51	479	180	99	.55	13.9	60	17	12	9.5	7.6	5.7	
APRIL	47	509	256	110	.43	19.7	90	18	13	11	8.7	6.8	
MAY	18	434	228	132	. 58	17.6	120	19	14	12	9.8	7.8	
JUNE	9.7	292	95	67	.71	7.3	183	27	18	15	12	10	
JULY	4.8	50	26	11	.42	2.0							
AUGUST	4.7	28	17	5.5	.33	1.3							
SEPTEMBER	8.5	26	17	4.4	• 25	1.3							
ANNUAL	21	181	108	44	.41	100							

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1922-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1922-57

				RECURREN ROBABILIT			PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECUID ANNUAL	
1.25 80 <b>%</b>	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1 <b>%</b>	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
545	1120	2250	3200	4610	5820	7140							*****
							1	760	1310	1690	2170	2520	
VE I GHTED	SKEW =	.073					3	615	995	1230	1500	1670	
							7	497	747	878	1010	1080	
							15	416	581	651	711	739	
							30	351	477	527	566	583	
							60	292	403	448	484	500	
							90	255	347	384	413	426	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1922-57

			DISCHA	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
	5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85%	90%	95%
38	35	294	231	186	152	120	74	44	30	23	21	19	18	16	13

# 14341500 SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF THE TWO COLLECTION CANALS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1961-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL,	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	ON-
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	12	110	21	20	.96	1.8	1	11	8.5	7.5	6.8		
NOVEMBER	16	140	50	38	.75	4.2	3	11	8.8	7.8	7.1		
DECEMBER	16	818	148	174	1.18	12.6	7	11	9.2	8.3	7.6		
JANUARY	17	446	160	124	.78	13.6	14	12	10	9.4	8.8		
FEBRUARY	16	302	129	73	.57	10.9	30	14	12	11	10		
MARCH	29	556	165	111	.67	14.0	60	15	13	12	11		
APRIL	48	451	202	104	.51	17.1	90	17	14	12	12		
MAY	32	511	172	118	.69	14.6	120	18	15	13	12		
JUNE	16	183	66	42	.64	5.6	183	26	20	18	17		
JULY	10	45	27	9.0	.34	2.3							
AUGUST	10	35	20	6.7	.33	1.7							
SEPTEMBER		35	19	5.9	.31	1.6							
ANNUAL	29	187	98	46	•47	100							
DI SCHARGE	BASE , IN CFS,	PROBABILI D ON PERIO	OD OF RE	CORD	INTERVAL	, IN		BASE	D ON PERI	OD OF RE	PECORD 19	61-82 ED RECUR	
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD CURRENCE	INTERVAL	, IN NT	PERIOD (CON-	BASE DISCH	D ON PERI ARGE, IN INTERVA	CFS, FOR	CORD 19	61-82 ED RECUR ANNUAL	RENCE
DI SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL	, IN	PERIOD	BASE DISCH	D ON PERI ARGE, IN INTERVA	CFS, FOR	R INDICATI	61-82 ED RECUR ANNUAL	RRENCE
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# 14342500 NORTH FORK LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK, OR

LOCATION.--Lat 42°22'35", long 122°21'20", in SELSWL sec.4, T.37 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.5 mi downstream from Fish Lake dam, 14 mi east of Lakecreek, and at mile 15.2.

DRAINAGE AREA .-- 20.8 m12.

10%

88

108

15%

73

61

50

41

31

25

20

16

14

PERIOD OF RECORD.--October 1914 to July 1915, June 1916 to September 1982. Monthly discharge only November 1916 to May 1917, published in WSP 1318.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,571.4! ft National Geodetic Vertical Datum of 1929. Oct. 1, 1914, to July 31, 1915, nonrecording gage at site 0.5 mi upstream at different datum. June 1, 1916, to July 9, 1918, nonrecording gage and July 10, 1918, to Oct. 28, 1932, water-stage recorder at site 0.25 mi upstream at different datums.

REMARKS.--Since 1915, Fish Lake has stored water for irrigation by Medford Irrigation District. Cascade Canal diverts from Fourmile Lake in Klamath River basin and discharges into lava bed 1.0 mi above Fish Lake; diversion began August 1923. No diversion from creek above station.

AVERAGE DISCHARGE. -- 66 years (water years 1917-82), 35.6 ft<sup>3</sup>/s, 25,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 940 ft<sup>3</sup>/s June 5, 1917, computed from rate of change in contents of reservoir after break in dam occurred; no flow at times.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1918-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1919-82

80%

13

85%

10

90%

6.5

2.9

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MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	(CFS)	TION (CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	•2	50	14	11	.84	3.2	1						
NOVEMBER	0.0	46	14	11	.81	3.2	3						
DECEMBER	1.6	42	16	10	.63	3.7	7						
ANUARY	1.3	67	18	11	•60	4.3	14	3.7	.8	.3	.2	.1	0
FEBRUARY	4.3	67	19	11	.57	4.4	30	4.7	1.1	.4	.2	-1	0
MARCH	5.1	100	20	13	•65	4.7	60	7.2	2.3	1.1	•6	.2	
\PRIL	4.2	80	24	12	• 49	5.7	90	9.3	4.3	2.7	1.8	1.1	
MAY	16	78	38	15	.41	8.8	120	11	6.0	4.2	3.0	2.1	1.
JUNE	17	118	55	24	.43	13.0	183	15	8.9	6.8	5.4	4.1	3.
IULY	22	145	86	28	.33	20.2							
AUGUST SEPTEMBER	14 6.2	129 76	80 42	26 16	.33 .38	18.8 10.0		SHORT-DUF ZERO EV <b>E</b> N		TA UNCER	TAIN DUE	TO EXCE	SSIVE
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DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON PERIOD ON P	TY OF INDO OF RE	STANTANE CORD 191 CCURRENCE SABILITY, 25 4%	OUS PEAK   8-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH#  2 50%  117 115 113 109 102	DN PERI	OD OF RE- CFS, FOR L, IN YE. E PROBAB 10 10% 147 144 141 138 133	INDICATI ARS, AND ILITY, II 25 4% 155 152 147 145	18-82  ED RECURI ANNUAL N PERCEN  50 2%  160 156 151 149 145	100 1% 165 159 153 151 148

# 14343000 NORTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'10", long 122°32'10", in NW\ sec.36, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.2 mi upstream from Wasson Canyon, 4.9 mi east of Lakecreek, and at mile 4.8.

DRAINAGE AREA .-- 43.8 mi2.

PERIOD OF RECORD.--September 1911 to March 1913, July to September 1917, May 1922 to December 1964, September 1965 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "above Medford intake, near Lakecreek" 1922-28, 1931-40. Records for April to September 1916, May 1917 to September 1919, April to September 1921, and October 1923 to September 1924 at site 3 mi upstream not equivalent owing to diversion and difference in drainage areas.

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1968. Altitude of gage is 2,160 ft, from topographic map. Sept. 10, 1911, to Mar. 31, 1913, and July 1 to Sept. 30, 1917, nonrecording gage at site 1,000 ft dowstream at different datums. May 26, 1922, to Dec. 31, 1964, water-stage recorder at site 1,000 ft downstream at datum 2,125.01 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow partly regulated since 1915 by Fish Lake. Diversions for irrigation above station; some water diverted into Fish Lake from Fourmile Lake, in Klamath River basin, since 1923.

AVERAGE DISCHARGE.--60 years (water years 1912, 1923-64, 1966-82), 71.1 ft<sup>3</sup>/s, 51,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 6.06 ft, present site and datum; minimum, 11 ft<sup>3</sup>/s Oct. 29 to Nov. 8, 1931.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	14	79	36	15	.42	4.2	1	26	19	16	13	11	10
NOVEMBER	16	81	41	14	.35	4.8	3	26	19	16	13	11	10
DECEMBER	19	122	55	23	.41	6.4	7	27	19	16	13	11	10
JANUARY	25	145	59	22	.38	6.9	14	27	19	16	14	12	11
FEBRUARY	28	126	64	22	.34	7.4	30	29	21	17	15	13	12
MARCH	30	253	71	31	.43	8.3	60	33	24	21	18	16	14
APRIL	33	144	74	22	.29	8.7	90	38	28	24	21	18	16
MAY	43	140	82	23	.28	9.6	120	42	32	27	24	21	19
JUNE	44	149	89	24	.27	10.4	183	49	38	33	29	25	23
JULY	49	164	113	27	.24	13.2							
AUGUST	32	155	106	27	.25	12.4							
SEPTEMBER	22	119	67	19	. 28	7.8							
ANNUAL	34	118	72	16	•22	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1912-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1912-82

DISCHARGE, YEARS, A							PERIOD (CON-		ARGE, IN INTERV EXCEEDANG	AL, ÎN Y	EARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
153	238	408	565	825	1070	1380						_	
							1	162	238	308	427	542	684
WE I GHTED	SKEW =	.701					3	149	205	256	338	414	505
							7	140	180	211	257	295	338
							15	136	166	186	211	229	247
							30	131	156	171	187	198	207
							60	119	141	152	165	173	181
							90	108	128	139	151	159	166

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-82

		DISC	HARGE, I	N CFS, W	HICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEI	NT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
143	123	111	101	93	86	75	65	57	49	45	41	37	32	25

#### 14350000 EMIGRANT CREEK NEAR ASHLAND, OR

LOCATION.--Lat 43°09'50", long 122°36'15", in SEtNEt sec.20, T.39 S., R.2 E., Jackson County, Hydrologic Unit 17100309, on left bank 0.1 mi downstream from Emigrant Dam, 6 mi southeast of Ashland, and at mile 29.2.

DRAINAGE AREA. -- 64.3 ml2.

PERIOD OF RECORD. -- January to June 1920, October to July 1922, February 1923 to May 1924 (incomplete), October 1924 to November 1925, February to August 1926, October 1926 to September 1928, April 1929 to September 1930, April 1931 to October 1932 (incomplete), April 1933 to September 1935, April 1936 to September 1939 (incomplete), April 1940 to September 1947, January 1948 to October 1952 (incomplete), December 1952 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 2,042.80 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Oct. 1, 1926, water-stage recorder or nonrecording gage at several nearby sites at various datums. Oct. 1, 1926, to Feb. 24, 1959, water-stage recorder near present site at datum 10.93 ft higher. Feb. 25, 1959, to May 7, 1961, water-stage recorder at site 1.0 mi downstream at different datum.

REMARKS.--Flow regulated since 1924 by Emigrant Lake. Several diversions above station for irrigation, the principal diversion canals are Ashland lateral and East lateral. From June 1923 to August 1960, water diverted by Keene Creek Canal from Klamath River basin into Emigrant Creek above station. Beginning May 1960, water from Klamath River basin diverted to Emigrant Creek above station via Green Springs powerplant diversion.

AVERAGE DISCHARGE.--42 years (water years 1925, 1927-30, 1934-35, 1941-47, 1954-82), 31.8  $ft^3/s$ , 23,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft<sup>3</sup>/s Feb. 20, 1927, by computation of peak flow over dam; no flow at times.

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF GREEN SPRINGS DIVERSION)

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	CFS, FOR IN YEARS E PROBAB	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	0.0	9.6	2.2	3.2	1.45	•6	1						
NOVEMBER	0.0	47	4.0	13	3.16	1.1	3						
DECEMBER	- 1	158	29	49	1.69	8.2	7						
JANUARY	.1	230	58	67	1.16	16.1	14						
FEBRUARY	. 1	243	82	78	.95	22.7	30						
MARCH	.1	167	49	45	.91	13.8	60	.2	.1	- 1	0.0	0.0	
APRIL	.2	163	52	43	.82	14.5	90	•5	•2	.2	.1	.1	
MAY	.5	91	19	21	1.10	5.2	120	1.5	•6	.4	.2	.1	
JUNE	.7	33	12	8.6	.74	3.2	183	5.1	1.4	.6	.3	. 1	
JULY	12	43	27	7.5	.27	7.6							
AUGUST	4.3	33	20	6.9	.34	5.6	NOTE: S	SHORT-DUR	ATION DA	TA UNCERT	AIN DUE	TO EXCES	SSIVE
SEPTEMBER	0.0	14	4.9	3.4	.70	1.4	Z	ZERO EVEN	TS.				
ANNUAL	6.1	46	27	15	.55	100							

MAGNITUDE	AND PROBABILITY	OF	INSTANTANEOUS PEAK FLOW
	BASED ON PERIOD	0F	RECORD 1925-82

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-60

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1925-60

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1942-60

DISCHARGE, YEARS, A			DICATED R				PERIOD (CON-		INTERV	AL, İN Y	EARS, AN	TED RECU D ANNUAL IN PERCEI	
1.25 8 <b>0%</b>	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4 <b>%</b> 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%
WEIGHTED	SKEW =						1 3 7 15 30 60	295 261 209 147 106 84 68	704 582 438 290 204 150 120	1020 814 598 390 278 196 156	1430 1100 792 513 378 255 199	1720 1290 925 599 454 297 230	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-60

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIM	E 		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
114	70	48	38	31	25	14	4.7	1.3	.5	.3	.2	.2	. 1	.1

# 14350000 EMIGRANT CREEK NEAR ASHLAND, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF GREEN SPRINGS DIVERSION)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	INDICAT S, AND AI ILITY, II	NNUAL NO	N-
ONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
CTOBER	0.0	46	3.9	10	2.63	.8	1						
OVEMBER	0.0	70	7.2	19	2.61	1.5	3						
ECEMBER	0.0	262	49	79	1.59	10.6	7						
ANUARY	0.0	288	65	87	1.34	13.9	14						
EBRUARY	0.0	98	26	34	1.32	5.5	30						
ARCH	0.0	158	36	49	1.36	7.7	60						
PRIL	.3	201	80	63	.80	17.2	90						
ΙΑΥ	.4	139	45	42	.94	9.6	120						
UNE	2.7	61	26	13	.49	5.6	183	7.9	1.0	.3	. 1		
ULY	31	84	51	14	. 28	10.9							
UGUST	23	72	51	12	. 24	11.8	NOTE: L	OW-FLOW	DATA UNC	ERTAIN D	UE TO EXC	CESSIVE	ZER0
EPTEMBER	.1	47	25	11	.44	5.4	E	VENTS.					
NNUAL	11	83	39	23	.60	100							
SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF REC	CORD	OUS PEAK I	 , IN		BASED	ON PERI	OD OF REC	F ANNUAL CORD 196 INDICATE ARS. AND	62-82  ED RECUR	
SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF REC	CORD	INTERVAL IN PERCEI	 , IN	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF REC	CORD 196	52-82  ED RECUR ANNUAL	 RENCE
I SCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF REC	CORD 196 INDICATE	52-82  ED RECUR ANNUAL	RENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASED DISCHA	ON PERI	OD OF REC	INDICATE ARS, AND ILITY, IT	62-82  ED RECUR ANNUAL N PERCEN	RENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASED DISCHA	ON PERI RGE, IN INTERVA XCEEDANC	OD OF REC	INDICATE ARS, AND ILITY, IT	62-82  ED RECUR ANNUAL N PERCEN	 RENCE
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF REC	INDICATE ARS, AND ILITY, II	52-82 ED RECUR ANNUAL N PERCEN 50 2%	T 100
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI RGE, IN INTERVA XCEEDANC 5 20%	CFS, FOR L, IN YEE E PROBAB	INDICATE ARS, AND ILITY, IT	52-82 ED RECUR ANNUAL N PERCEN 50 2%	T 100
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  247 233	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 492 472	OD OF REC CFS, FOR L, IN YEL E PROBAB 10 10%	INDICATE ARS, AND ILITY, II	ED RECUR ANNUAL N PERCEN 50 2%	T 100
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  247 233 211	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 492 472 426	OD OF REC CFS, FOR L, IN YEL E PROBAB 10 10%	INDICATE ARS, AND ILITY, IN 25 4 \$ 973 959 887	52-82 ED RECUR ANNUAL N PERCEN 50 2%	T 100
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  247 233 211 161	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 492 472 472 426 320	OD OF REG	INDICATE ARS, AND ILITY, II  25 45 973 959 887 702	52-82 ED RECUR ANNUAL N PERCEN 50 2%	T 100
I SCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  247 233 211 161 116	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  492 472 426 320 208	OD OF REC CFS, FOR L, IN YEL E PROBAB 10 10% 690 670 609 465 287	INDICATE ARS, AND ILITY, !!  25 4  973 959 887 702 407	52-82  ED RECUR ANNUAL N PERCEN  50 2%	T 10
ISCHARGE YEARS, 1 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF	CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 . 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  247 233 211 161 116 89 72  OF RECOR	RGE, IN INTERVA XCEEDANC 5 20%	OD OF REI	ORD 196 INDICATE ARS, AND ILITY, !! 25 45 973 959 887 702 407 274 207	52-82  ED RECUR ANNUAL N PERCEN  50 2%	T 100
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50% O SKEW =	FOR INDICATE TO THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O	DD OF RECONCE PROBA	CORD CURRENCE ABILITY, 25 4% I TABLE FFS, WHI	INTERVAL IN PERCEI 50 2%  OF DAILY M	JALED OR E	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  XCEEDED FOF	DISCHA  E 2 50%  247 233 211 161 116 89 72  OF RECOR	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 492 472 426 320 208 149 117 D 1962-8	OD OF REI	973 959 887 702 407 274 207	ED RECUR ANNUAL N PERCEN 50 2%	T 1000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF	CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%  OF DAILY M	, IN NT 100 . 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  XCEEDED FOF	DISCHA  E 2 50%  247 233 211 161 116 89 72  OF RECOR	RGE, IN INTERVA XCEEDANC 5 20%	OD OF REI	ORD 196 INDICATE ARS, AND ILITY, !! 25 45 973 959 887 702 407 274 207	52-82  ED RECUR ANNUAL N PERCEN  50 2%	T 100

LOCATION.--Lat 42°08'55", long 122°42'55", near line between NWL and SWL sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, in Rogue River National Forest, on left bank 0.3 mi above city diversion, 2.5 mi south of Ashland, and at mile 0.4.

14353000 WEST FORK ASHLAND CREEK NEAR ASHLAND, OR

DRAINAGE AREA. -- 10.5 mi<sup>2</sup>, at diversion dam 0.3 mi downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum; December 1974 to September 1982. Monthly discharge only for some periods published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,962.75 ft National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 0.2 mi upstream at different datum. Oct. 14, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.3 mi downstream at different datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1925-32, 1976-82), 8.92 ft<sup>3</sup>/s, 11.54 in/yr, 6,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 330 ft<sup>3</sup>/s Dec. 2, 1962, gage height, 15.51 ft, site and datum then in use, from rating curve defined by computation of peak flow over dam; minimum, 1.3 ft<sup>3</sup>/s Aug. 29, 1931, Sept. 8, 9, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1900. Discharge, 4,780 ft3/s by slope-area measurement of peak flow, gage height, 9.5 ft, from floodmarks. Peak believed to be affected by release from debris dams breaking

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1926-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	DN-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 <b>2</b> 0%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	2.4	8.4	3.6	1.6	.43	3.3	1	2.1	1.7	1.5	1.4		
NOVEMBER	2.4	15	6.1	3.5	•57	5.6	3	2.1	1.7	1.5	1.4		
DECEMBER	2.9	39	8.8	8.6	.98	8.0	7	2.2	1.7	1.5	1.4		
JANUARY	2.8	21	8.5	5.8	.68	7.8	14	2.3	1.8	1.6	1.5		
FEBRUARY	2.5	<b>2</b> 6	11	7.7	.69	10.2	30	2.4	1.9	1.6	1.5		
MARCH	2.8	24	12	5.6	.49	10.5	60	2.7	2.1	1.8	1.6		
APRIL	4.5	24	13	6.1	.47	11.8	90	2.9	2.2	2.0	1.8		
YAN	4.5	32	18	9.5	.52	16.7	120	3.1	2.4	2.1	1.9		
JUNE	3.2	35	15	9.8	•65	13.8	183	3.9	3.0	2.6	2.4		
JULY	2.1	13	6.5	3.5	.54	5.9							
AUGUST	1.6	6.4	3.7	1.6	.42	3.4							
SEPTEMBER	1.8	7.5	3.4	1.4	-41	3.1							
ANNUAL	3.3	18	8.9	4.4	. 49	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLDW BASED ON PERIOD OF RECORD 1925-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1925-82

SCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50%	5 20% 	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
30	72	205	378	768									
WEIGHTED	CKEM -	 E07					1	40	74	99	132		
WEIGHIED	SKEW =	•587					7	33 27	58 43	76 54	100 66		
							15	22	34	42	51		
							30	18	29	36	44		
							60	16	<b>2</b> 6	32	40		
							90	15	23	28	35		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-82

 		DISCHAF	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIM	E		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
27	21	17	15	12	9.8	7.3	5.6	4.5	3.7	3.4	3.1	2.7	2.5	2.1

# 14353500 EAST FORK ASHLAND CREEK NEAR ASHLAND. OR

LOCATION.--Lat 42°09'10", long 122°42'30", near line between NEt and NWt sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, Rogue River National Forest, on left bank 0.1 mi above city diversion dam, 2.5 mi south of Ashland, and at mile 0.2.

DRAINAGE AREA. -- 8.14 mi<sup>2</sup>, at diversion dam 0.1 mi downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum, December 1974 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,903.70 ft National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 200 ft downstream at different datum. Oct. 19, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.1 mi downstream at different datum.

REMARKS. -- No regulation or diversion.

AVERAGE DISCHARGE.--15 years (water years 1925-32, 1976-82), 9.37 ft3/s, 15.63 in/yr, 6,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335 ft³/s Dec. 2, 1962, gage height, 5.42 ft, site and datum then in use, from rating curve defined by computations of peak flow over dam; minimum, 0.47 ft³/s Mar. 14, 1977, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1925. Discharge, 5,630 ft<sup>3</sup>/s by slope-area measurement of peak flow, gage height, 10.2 ft from floodmarks. Peak believed to be affected by release from debris dams breaking unstream.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1926-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	2.1	6.8	3.4	1.2	.35	2.9	1	2.1	1.6	1.3	1.1		
NOVEMBER	2.7	16	6.2	4.3	.70	5.4	3	2.2	1.6	1.3	1.1		
DECEMBER	2.7	43	9.5	9.9	1.04	8.3	7	2.2	1.6	1.4	1.2		
JANUARY	2.7	20	8.2	5.8	.71	7.1	14	2.3	1.8	1.6	1.4		
FEBRUARY	2.5	31	11	8.4	.75	9.9	30	2.5	1.9	1.7	1.5		
MARCH	2.8	25	11	5.9	.52	9.8	60	2.7	2.1	1.8	1.6		
APRIL	3.7	23	12	5.8	.48	10.4	90	2.9	2.2	1.9	1.6		
MAY	5.4	34	19	9.8	.51	16.7	120	3.1	2.4	2.0	1.8		
JUNE	4.0	51	18	13	.73	16.0	183	3.9	3.0	2.5	2.2		
JULY	2.1	18	8.3	5.0	.60	7.2							
AUGUST	1.5	6.7	3.9	1.8	.45	3.4							
SEPTEMBER	1.7	6.6	3.2	1.3	. 39	2.8							
ANNUAL	3.2	19	9.4	5.0	.53	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1925-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1925-82

DISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, ÍN YI	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
30	74	219	414	862									
							1	43	79	105	139		
WEIGHTED	SKEW =	•587					3	34	62	83	112		
							7	28	46	59	74		
							15	23	38	48	60		
							30	19	31	40	50		
							60	16	27	34	43		
							90	15	24	30	38		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-82

 		DISCHAF	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
 27	21	18	15	13	11	7.6	5.9	4.6	3.6	3.2	3.0	2.7	2.5	2.0

## 14357500 BEAR CREEK AT MEDFORD, OR

LOCATION.--Lat 42°19'40", long 122°52'10", in NW± sec.30, T.37 S., R.1 W., Jackson County, Hydrologic Unit 17100308, on left bank 40 ft upstream from Main Street Bridge in Medford and at mile 9.91.

DRAINAGE AREA.--289 mi2.

417

270

205

162

131

106

73

52

38

27

22

18

14

10

5.8

PERIOD OF RECORD.--March 1915 to June 1920 (no low-flow records), October 1920 to September 1981. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,343.98 ft National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Dec. 31, 1947.

REMARKS.---Flow partly regulated since 1924 by Emigrant Lake. Numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--61 years (water years 1921-81), 114 ft3/s, 82,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft<sup>3</sup>/s Dec. 2, 1962, gage height, 8.04 ft; maximum gage height, about 11.0 ft Feb. 20, 1927, from floodmarks, present datum, site then in use; no flow at times.

STATISTICAL SUMMARIES

	La i ki i Millia	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	ļ	ARGE, IN INTERVAL, EXCEEDANC	IN YEAR	RS, AND	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.7	216	33	32	.98	2.4	1	9.4	3.2	1.5			
NOVEMBER	8.2	246	59	50	.85	4.3	3	10	3.4	1.7	.8		
DECEMBER	17	1137	147	195	1.33	10.7	7	11	3.9	1.9	.9		
JANUARY	13	1080	221	238	1.08	16.0	14	13	4.3	2.1	1.1		
FEBRUARY	12	873	223	194	.87	16.2	30	15	5.2	2.6	1.3		•3
MARCH	14	787	202	163	.81	14.7	60	17	6.4	3.3			
APRIL	4.9	686	197	133	.68	14.3	90	19	7.5	4.1	2.4		
MAY	1.5	391	134	99	.74	9.7	120	22	9.3	5.5			
JUNE	2.1	232	73	5 <b>5</b>	.75	5.3	183	32	15	8.7	5.4	3.0	1.9
JULY	.5	95	29	23	.78	2.1							
AUGUST SEPTEMBER	•4	115	29	27 27	.93	2.1 2.3							
SEPTEMBER	.7	92	31	21	.85	2.3							
ANNUAL	8.4	304	114	75	.66	100							
					OUS PEAK F 6-81	FLOW	MAG		ND PROBA				LOW
YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD 191	6-81 INTERVAL, IN PERCEN	, IN NT	PERIOD (CON-	BASED  DISCHA	ON PERI	OD OF RECEIVED	ECORD 19 R INDICATEARS, AND	921-81 TED RECUID ANNUAL	RRENCE
YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI- L EXCEEDA	OD OF RE CATED RE NCE PROB	CORD 191 CURRENCE ABILITY,	6-81 INTERVAL, IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASEC DISCHA	O ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAE	ECORD 19 R INDICA EARS, AND BILITY,	921-81 TED RECUI D ANNUAL IN PERCEI	RRENCE
YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD 191	6-81 INTERVAL, IN PERCEN	, IN NT	PERIOD (CON-	BASED  DISCHA	ON PERI	OD OF RECEIVED	ECORD 19 R INDICATEARS, AND	921-81 TED RECUID ANNUAL	RRENCE
YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI- L EXCEEDA 5 20%	OD OF RE	CORD 191  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA E	O ON PERI RGE, IN INTERVA XCEEDANC	OD OF RE CFS, FOF L, IN YE E PROBAE	ECORD 19 R INDICATE ARS, AND BILITY,	921-81 TED RECUI D ANNUAL IN PERCEI	RRENCE NT
YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI- L EXCEEDA 5 20%	OD OF RE	CORD 191  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 100	PERIOD (CON- SECU- TIVE	BASEC DISCHA E	O ON PERI RGE, IN INTERVA XCEEDANC	OD OF RE CFS, FOF L, IN YE E PROBAE	ECORD 19 R INDICATE ARS, AND BILITY,	921-81 TED RECUI D ANNUAL IN PERCEI	RRENCE NT
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDI- L EXCEEDA 5 20%	OD OF RE	CORD 191  CURRENCE ABILITY,  25 4%	INTERVAL, IN PERCEN	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	O ON PERI	OD OF RECOMMENDED	ECORD 19 R INDICA EARS, AND BILITY, 25 4%	921-81 TED RECUI O ANNUAL IN PERCEI	100 1%
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## 14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR

LOCATION.--Lat 42°26'15", long 122°59'10", in SW\ sec.18, T.36 S., R.2 W., Jackson County, Hydrologic Unit 17100308, on right bank at Raygold, 0.1 mi downstream from Gold Ray Dam, 1.0 mi downstream from Bear Creek, 5.6 mi northwest of Central Point, and at mile

DRAINAGE AREA. -- 2.053 mi2.

PERIOD OF RECORD.--August 1905 to September 1982. Prior to October 1921, published as "near Tolo."

GAGE.--Water-stage recorder. Datum of gage Is 1,121.78 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1914, nonrecording gage and Sept. 19, 1914, to Sept. 30, 1956, water-stage recorder, at site 300 ft upstream at same datum.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake. Slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--77 years (water years 1906-82), 2.963 ft<sup>3</sup>/s, 2.147.000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 23.43 ft, from rating curve extended above 63,000 ft<sup>3</sup>/s on basis of slope-area measurement of 113,000 ft<sup>3</sup>/s; minimum not determined; minimum daily, 616 ft<sup>3</sup>/s Sept. 6, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 32 ft, discharge not determined, and flood in February 1890 reached a stage of about 27.5 ft, discharge not determined, from information by Corps of Engineers.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1906-76 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-76

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	R INDICA RS, AND BILITY,	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	. 50 2%	100 1%
OCTOBER	846	3799	1403	437	.31	3.9	1	1100	926	841	774	702	656
NOVEMBER	924	8409	2341	1349	.58	6.5	3	1120	946	861	793	720	673
DECEMBER	1073	18830	3675	2790	.76	10.2	7	1130	957	870	801	726	677
JANUARY	1112	11960	4605	2740	.60	12.8	14	1150	969	879	807	730	680
FEBRUARY	1208	12540	4713	2211	.47	13.1	30	1170	985	892	817	738	686
MARCH	1974	12520	4286	1895	.44	11.9	60	1210	1010	918	841	758	704
APRIL	1649	7805	4207	1280	.30	11.7	90	1240	1040	944	864	777	721
MAY	1279	6702	3908	1297	.33	10.8	120	1290	1080	974	890	800	742
JUNE	920	5749	2839	1119	• 39	7.9	183	1550	1250	1110	1000	894	826
JULY	747	2701	1607	453	.28	4.5							
AUGUST	642	2042	1266	277	.22	3.5							
SEPTEMBER	679	1763	1233	227	.18	3.4							
ANNUAL	1159	5132	2998	892	.30	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1906-76

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906-76

	•	FOR IN				RVAL, IN ERCENT	PERIOD (CON-	DISC	INTER	N CFS, FO VAL, IN N NCE PROB	YEARS, A	ND ANNUA	_
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
15200	26100	46400	63500	89600	112000	139000		10400	74100	46100	64000	70400	06600
WEIGHTE	D SKEW =	-201					3	19400 14500	34100 24900	46100 33600	64000 46700	79400 58300	96600 71500
							7 15	10800 8180	17500 12 <b>4</b> 00	22900 15600	30900 20100	37800 23700	45400 27700
							30 60 90	6500 5480 5040	9360 7610 6860	11500 9090 8050	14400 11000 9540	16800 125 <b>0</b> 0 10600	19300 14000 11700

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-76

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATE	D PERCEN	T OF TIM	IE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
7020	5560	<b>4</b> 790	4200	3750	3380	2720	2120	1720	1470	1370	1280	1200	1120	993

225

## 14361500 ROGUE RIVER AT GRANTS PASS, OR

LOCATION.--Lat 42°25'50", long 123°19'00", in NW½ sec.20, T.36 S., R.5 W., Josephine County, Hydrologic Unit 17100308, on right bank at city of Grants Pass filter plant, 0.6 mi upstream from bridge on State Highway 99 at Grants Pass, and at mile 101.8.

DRAINAGE AREA .-- 2.459 mi2.

9390

6710

5580

4910

4380

3910

3090

2400

1850

1540

1430

1310

1200

1080

961

PERIOD OF RECORD.--October 1938 to September 1982. Prior to January 1939 monthly discharge only, published in WSP 1318.

GAGE.,-Water-stage recorder. Datum of gage is 885.28 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 8, 1957, at datum 3.00 ft higher.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake, slight regulation by Fish Lake and Emigrant Lake. Large fluctuations at times caused by Savage Rapids Dam 5.5 mi above station. Many diversions from Rogue River and tributaries above station, the largest of which is at Savage Rapids Dam of Grants Pass Irrigation District.

AVERAGE DISCHARGE.--44 years, 3,475 ft<sup>3</sup>/s, 2,518,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152,000 ft $^3$ /s Dec. 23, 1964, gage height, 34.15 ft, from rating curve extended above 93,000 ft $^3$ /s; minimum, 195 ft $^3$ /s Jan. 30, 1961; minimum daily, 606 ft $^3$ /s Sept. 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 42 ft, present datum (information furnished by Corps of Engineers). Flood in February 1890 reached a stage of about 35 ft, present datum, and that of Feb. 21, 1927, about 31 ft, present datum, according to local resident.

	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE Days)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	987	4934	1627	686	.42	3.8	1	990	823	744	684	621	
NOVEMBER	1132	9086	2841	1605	.56	6.6	3	1000	847	775	721	664	
DECEMBER	1450	23380	5403	4352	.81	12.5	7	1020	863	794	742	687	
JANUARY	1797	15170	6741	4178	.62	15.5	14	1030	881	813	762	709	
FEBRUARY	2469	14600	6087	2467	-41	14.0	30	1060	905	836	786	734	
MARCH	2118	15320	5423	2746	.51	12.5	60	1110	949	881	831	779	
APRIL	1874	8395	4546	1357	.30	10.5	90	1170	998	923	866	807	
MAY	1714	6368	4056	1262	.31	9.4	120	1260	1080	993	927	857	
JUNE	1131	5647	2829	1076	.38	6.5	183	1610	1360	1250	1170	1090	
JULY	817	2335	1473	408	.28	3.4							
AUGUST	805	1919	1168	263	.23	2.7							
SEPTEMBER	791	1594	1177	211	.18	2.7							
		6269  PROBABILI D ON PERI			.32  OUS PEAK 1 0-76	100  FLOW	 MA		AND PROE			 AL HIGH F 1940-76	 LOW
MAGNII DISCHARGE, YEARS, A	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON-	BAS	ED ON PER HARGE, IN	RIOD OF  N CFS, F /AL, IN	RECORD  OR INDIC YEARS, A		RRENCE
DISCHARGE,	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE CATED RE	STANTANE CORD 194 CURRENCE	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE	DISCI	ED ON PER HARGE, IN INTERN EXCEEDAN	RIOD OF N CFS, F /AL, IN NCE PROB	RECORD OR INDIC YEARS, A ABILITY,	1940-76  ATED RECUIND ANNUAL IN PERCE	RRENCE NT
MAGNII	TUDE AND BASE IN CFS, IND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU-	BASI DISCI	ED ON PER HARGE, IN INTERN EXCEEDAN	RIOD OF N CFS, F /AL, IN NCE PROB	RECORD OR INDIC YEARS, A ABILITY,	1940-76 ATED RECU ND ANNUAL IN PERCE	RRENCE
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50%	ED ON PER HARGE, IN INTERN EXCEEDAN 5 20%	RIOD OF  N CFS, F  VAL, IN  NCE PROB  10  10%	RECORD OR INDIC YEARS, A ABILITY, 25 4%	1940-76  ATED RECUIND ANNUAL IN PERCE 50 2%	100 1%
MAGNIT	FUDE AND BASE IN CFS, IND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, IN INTER EXCEEDAN 5 20%	RIOD OF N CFS, F VAL, IN NCE PROB 10 10%	RECORD OR INDIC YEARS, A ABILITY, 25 4% 102000 74000	1940-76  ATED RECUIND ANNUAL IN PERCE 50 2%  123000 90400	100 1%
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 31400 23000 16000	HARGE, IN INTERV EXCEEDAN  5 20%  56200 40400 27000	N CFS, F /AL, IN NCE PROB 10 10% 75200 54100 35700	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  102000 74000 48500	1940-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  123000 90400 59200	100 1%
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7	DISCI 2 50% 31400 23000 16000 11600	ED ON PER HARGE, IN INTER\ EXCEEDAN 5 20% 56200 40400 27000 18300	75200 54100 35700 23400	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  102000 74000 48500 30500	1940-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  123000 90400 59200 36200	100 1%
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 250% 31400 23000 11600 8770	HARGE, IN INTERNEXCEEDAN  56200 40400 27000 18300 13300	75200 54100 75200 54100 35700 23400 16800	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  102000 74000 48500 30500 21700	1940-76  ATED RECUIND ANNUAL IN PERCEI  50 2\$  123000 90400 59200 36200 25800	100 1%
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 31400 23000 116000 8770 7080	HARGE, IN INTERVENCE EXCEEDAN 5 20%	75200 54100 35700 23400 16800 12700	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  102000 74000 48500 30500 21700 16200	1940-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  123000 90400 59200 36200 25800 19000	100 1%
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK I 0-76 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 250% 31400 23000 11600 8770	HARGE, IN INTERNEXCEEDAN  56200 40400 27000 18300 13300	75200 54100 75200 54100 35700 23400 16800	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  102000 74000 48500 30500 21700	1940-76  ATED RECUIND ANNUAL IN PERCEI  50 2\$  123000 90400 59200 36200 25800	100 1%
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	STANTANE CORD 194 CURRENCE ABILITY, 25 4%	OUS PEAK I 0-76 INTERVAL IN PERCEI 50 2%	FLOW  , IN  1100  118	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 31400 23000 16000 11600 8770 7080 6410	HARGE, IN INTEREXCEEDAN 5020\$ 56200 40400 27000 13300 13300 9070	75200 54100 75200 54100 35700 16800 12700 11000	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  102000 74000 48500 30500 21700 16200	1940-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  123000 90400 59200 36200 25800 19000	100 1%
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20% 73500 9	TY OF IN OD OF RE	STANTANE CORD 194 CURRENCE ABILITY, 25 4% 2000 15	OUS PEAK I 0-76 INTERVAL IN PERCEI 50 2% 8000	FLOW  IN  IOO  I%   MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 31400 23000 116000 8770 7080 6410 OF RECC	### FEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PEED ON PE	75200 54100 75200 54100 35700 23400 16800 12700 111000	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  102000 74000 48500 21700 16200 13600	1940-76  ATED RECUIND ANNUAL IN PERCEI  50 2%  123000 90400 59200 36200 25800 19000	100 1%

# 14362000 APPLEGATE RIVER NEAR COPPER. OR

LOCATION.--Lat 42°03'50", long 123°06'37", in SW&NW& sec.30, T.40 S., R.3 W., Jackson County, Hydrologic Unit 17100309, U.S. Corps of Engineers land, on left bank 0.1 mi downstream from Brushy Gulch, 0.6 mi downstream from Applegate Dam, 3.1 mi northeast of former town of Copper, and at mile 45.7.

DRAINAGE AREA. -- 225 mi2.

PERIOD OF RECORD.--October 1938 to September 1982. Prior to January 1939 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,747.51 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at site 0.6 mi upstream at datum 12.15 ft higher.

REMARKS.--Flow regulated since December 1980 by Applegate Lake. Some storage during winter in Squaw Lakes Reservoir, capacity, 1,100 acre-ft on Squaw Creek above station. Diversions above station from Carberry Creek for irrigation in Thompson Creek basin.

AVERAGE DISCHARGE. -- 44 years, 447 ft<sup>3</sup>/s, 323,900 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 25.38 ft, site and datum then in use, from high-water mark in well, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of four slope-area measurements of peak flows made in 1950, 1955, 1964, and 1974; minimum, 1.5 ft<sup>3</sup>/s Dec. 20, 1980, result of regulation at Applegate dam, 0.6 mi upstream.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1939-80 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1940-80

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	29	803	99	129	1.30	1.9	1	35	28	24	21	18	17
NOVEMBER	29	1549	286	288	1.01	5.3	3	36	28	25	22 -	19	17
DECEMBER	45	2617	598	585	.98	11.2	7	37	29	26	23	20	18
JANUARY	50	3761	846	772	•91	15.8	14	39	30	27	24	21	19
FEBRUARY	53	2942	<b>77</b> 3	509	.66	14.5	30	41	33	29	26	23	22
MARCH	93	1966	672	365	.54	12.6	60	46	37	33	29	26	24
APRIL	179	1347	727	287	.39	13.6	90	52	42	37	34	30	27
MAY	189	1418	749	325	.43	14.0	120	62	48	43	38	34	32
JUNE	112	898	371	217	.58	6.9	183	114	79	65	55	46	40
JULY	45	342	117	59	.50	2.2							
AUGUST	27	118	59	19	•31	1.1							
SEPTEMBER	24	91	49	13	.26	.9							
ANNUAL	80	1077	444	195	.44	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1939-80

CHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN EARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT							PERIOD (CON-		INTER	N CFS, FO VAL, IN Y NCE PROB	YEARS, A	ND ANNUA	L
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3090	6560	12900	17700	24300	29500	34800							
							1	4540	9100	12800	18100	22400	26900
E I GHTE	) SKEW =	411					3	3290	6560	9280	13300	16600	20300
							7	2350	4390	5930	8030	9680	11400
							15	1700	2900	3740	4830	5650	6450
							30	1310	2060	2550	3130	3540	3920
							60	1060	1580	1900	2260	2490	2710
							90	937	1350	1580	1820	1970	2090

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-80

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	PERCEN	IT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1390	1020	829	694	592	506	364	229	136	84	70	60	52	45	38

#### 14363000 APPLEGATE RIVER NEAR RUCH, OR

LOCATION.--Lat 42°10'40", long 123°02'40", in E-1/2 sec.15, T.39-\$., R.3 W., Jackson County, Hydrologic Unit 17100309, on downstream side of left pier of Cameron Bridge, 1.6 mi upstream from Little Applegate River and 4.2 mi south of Ruch.

DRAINAGE AREA .-- 302 mi2.

PERIOD OF RECORD.--June 1911 to September 1914, September 1925 to September 1953. Published as "near Buncom" 1911-14. Monthly discharge only February to September 1927, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,475.64 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

June 18, 1911, to Sept. 30, 1914, staff gage at datum 0.88 ft lower.

REMARKS.--Diversions for irrigation of about 700 ecres above station. Cameron (Comstock) ditch diverts as much as 14 ft<sup>3</sup>/s around station on left bank. An average of about 8 ft<sup>3</sup>/s is diverted above station for irrigation in Thompson Creek basin. Several hundred acre-feet stored in Squaw Lake (capacity, 1,100 acre-ft) each spring for irrigation the following summer.

AVERAGE DISCHARGE.--31 years (water years 1912-14, 1926-53), 389 ft<sup>3</sup>/s, 281,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft<sup>3</sup>/s Feb. 20, 1927, gage height, 16.0 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s; minimum, 7 ft<sup>3</sup>/s Sept. 2, 1929.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of 16.7 ft, from floodmarks.

## STATISTICAL SUMMARIES

A-1.4	
	BASED ON PERIOD OF RECORD 1927-53
	DACED AN AEDIAD OF DECORD 4007 67
PIONTILE AND ANNUAL PICAN DISCHARGES 1920 33	THOUSE AND I NODADIETT OF AMOUNT COM TECH
MONTHLY AND ANNUAL MEAN DISCHARGES 1926-53	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMUM	MAX IMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICATE RS, AND AN BILITY, IN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	20	849	86	153	1.77	1.9	1	23	14	11	8.3	6.1	
NOVEMBER	29	979	253	278	1.10	5.5	3	23	14	11	8.6	6.4	
DECEMBER	44	1592	468	444	•95	10.1	7	24	15	12	9.1	6.9	
JANUARY	37	2287	599	531	.89	12.9	14	26	16	13	10	7.8	
FEBRUARY	93	2270	702	542	.77	15.2	30	28	18	14	11	8.9	
MARCH	301	1548	607	315	.52	13.1	60	32	21	16	13	10	
APRIL	232	1539	706	307	.43	15.3	90	37	25	19	16	12	
MAY	118	1873	669	394	•59	14.5	120	45	30	24	20	15	
JUNE	35	1189	354	295	.83	7.7	183	85	53	42	34	27	
JULY	18	324	103	73	-71	2.2							
AUGUST	12	119	45	24	.54	1.0							
SEPTEMBER	11	77	34	16	. 47	•7							
ANNUAL	143	892	384	183	.48	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW	MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1926-53	BASED ON PERIOD OF RECORD 1926-53

					TY, IN PE		PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECUR D ANNUAL IN PERCEN	
1 • 25 80%	2 50%	5 20%	10 10% 	25 4%	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
2440	5140	10200	14400	20300	25100								
							1	3380	6520	9170	13200	16600	
WEIGHTED	SKEW =	279					3	2570	4690	6450	9080	11300	
							7	1920	3170	4090	5350	6360	
							15	1410	2170	2720	3450	4020	
							30	1120	1650	2010	2480	2840	
							60	909	1310	1570	1890	2130	
							90	791	1130	1360	1640	1850	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1926-53

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1270	939	758	617	525	444	296	181	112	69	56	46	38	31	23

## 14366000 APPLEGATE RIVER NEAR APPLEGATE, OR

LOCATION.--Lat 42°14'30", long 123°08'20", in NEt sec.26, T.38 S., R.4 W., Jackson County, Hydrologic Unit 17100309, on left bank 0.9 mi downstream from Keeler Creek, 1.8 mi southeast of Applegate, and at mile 26.7.

DRAINAGE AREA .-- 483 mi2.

PERIOD OF RECORD. -- October 1938 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,285.33 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--Flow regulated since December 1980 by Applegate Lake. Many diversions for irrigation above station. McDonald Creek Canal diverts from McDonald Creek above station for irrigation in Bear Creek basin. Thompson Creek Irrigation Association ditch diverts above station for irrigation in Thompson Creek basin. Fowler-Keeler and Berryman ditches divert above station for irrigation below.

AVERAGE DISCHARGE.--44 years, 551 ft<sup>3</sup>/s, 399,200 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 20.41 ft, from rating curve extended above 18,000 ft<sup>3</sup>/s on basis of slope-area measurements of flow at gage heights 18.00 ft and 19.57 ft; minimum, 4.6 ft<sup>3</sup>/s Sept. 22-25. 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 20, 1927, reached a stage of 18.7 ft, from floodmarks.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1939-80 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1940-80

	MINIMUM	MAY I MILM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEARS CE PROBAB	S, AND AN	INUAL NO	N-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	23	1118	118	179	1.52	1.8	1	17	10	8.0	6.4	5.0	4.2
NOVEMBER	38	1853	333	336	1.01	5.0	3	18	11	8.8	7.1	5.7	4.8
DECEMBER	59	3570	755	783	1.04	11.4	7	19	12	9.8	8.2	6.6	5.8
JANUARY	66	4601	1124	1010	.90	17.0	14	21	14	11	9.4	7.8	6.8
FEBRUARY	68	3915	1020	687	.67	15.4	30	24	16	13	11	9.0	7.9
MARCH	106	2590	873	517	.59	13.2	60	30	19	15	13	10	8.6
APRIL	164	1791	876	360	.41	13.3	90	38	25	20	17	14	12
MAY	218	1745	881	407	.46	13.3	120	52	36	30	26	21	19
JUNE	96	1156	443	282	.64	6.7	183	122	80	63	52	41	35
JULY	16	348	104	74	.71	1.6							
AUGUST	11	96	39	22	.56	.6							
SEPTEMBER	12	116	36	20	.54	.5							
ANNUAL	84	1391	548	264	.48	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1939-80

DISCHARGE, YEARS, A		S, FOR IN JAL EXCEE					PERIOD (CON-	DISC		VAL, IN	OR INDICA YEARS, AI ABILITY,	ND ANNUA	L
1.25 80%	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3980	8830	17900	25000	34800	42500	50400							74000
WEIGHTED	SKEW =	- 435					1	6030 4310	12600 8880	17900 12700	25500 18100	31600 22700	38000 27500
***************************************	JKLW -	• 400					7	3070	5850	7940	10700	12900	15100
							15	2160	3830	5020	6550	7690	8810
							30	1640	2710	3430	4310	4940	5540
							60	1310	2050	2510	3030	3380	3710
							90	1160	1750	2090	2460	2700	2900

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-80

_			DISCH	ARGE, IN	CFS, V	WHICH WAS	EQUALED	OR EXCEE	ED FOR	INDICATED	PERCENT	OF TIME			
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	1780	1290	1040	862	720	620	435	269	155	86	65	53	41	31	20

# 14368500 POWELL CREEK NEAR WILLIAMS, OR

LOCATION.--Lat 42°16'00", long 123°17'40", near center of sec.16, T.38 S., R.5 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.1 mi upstream from Blodgett ditch intake and 2 mi northwest of Williams.

DRAINAGE AREA. -- 8.17 mi2.

PERIOD OF RECORD. -- September 1946 to September 1958.

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft, by barometer.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--12 years (water years 1947-58), 16.2 ft<sup>3</sup>/s, 11,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft<sup>3</sup>/s Jan. 18, 1953, gage height, 5.36 ft, from rating curve^extended above 550 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 4.92 ft; minimum, 0.8 ft<sup>3</sup>/s Sept. 25, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 28, 1945, reached a stage of about 7.0 ft, from floodmarks.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1947-58

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1948-58

	MANAGEMEN	MANAMON	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	1.3	39	6.0	11	1.79	3.1	1	1.3	1.0	.9	.8		
NOVEMBER	1.7	37	10	11	1.07	5.2	3	1.3	1.0	.9	.8		
DECEMBER	2.7	83	25	25	1.00	12.9	7	1.4	1.1	1.0	•9		
JANUARY	6.0	90	48	33	•69	24.5	14	1.4	1.1	1.0	.9		
FEBRUARY	9.5	76	39	19	.50	19.7	30	1.5	1.2	1.1	1.0		
MARCH	12	57	28	15	•53	14.4	60	1.6	1.3	1.2	1.1		
APRIL	8.1	38	19	9.2	.48	9.9	90	1.8	1.5	1.4	1.3		
MAY	3.7	19	9.1	5.1	•57	4.6	120	2.0	1.6	1.5	1.4		
JUNE	2.3	14	5.0	3.2	•65	2.5	183	2.8	2.1	1.8	1.6		
JULY	1.9	4.9	2.7	1.0	.35	1.4							
AUGUST SEPTEMBER	1.4 1.2	3.1 2.6	2.0 1.7	.6 .4	.28 .25	1.0 .9							
ANNUAL	6.1	28	16	6.7	.41	100							
MAGNIT	FUDE AND BASE	PROBABILI D ON PERI	TY OF INS	STANTANEC CORD 1947	DUS PEAK 17-58	100  FLOW 	PERIOD (CON-	DISCHAF	ON PERIORS RGE, IN O	BILITY OF DD OF REC CFS, FOR , IN YEA	INDICATE	7-58 D RECUF ANNUAL	RENCE
MAGNIT	FUDE AND BASE	PROBABILI D ON PERIO	TY OF INS	STANTANEC CORD 1947	DUS PEAK 7-58 INTERVAL IN PERCEI	100  FLOW 	PERIOD (CON- SECU- TIVE	BASED DISCHAF	ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PER	OD OF REC CFS, FOR , IN YEA E PROBABI	INDICATE RS, AND LITY, IN	7-58 D RECUPANNUAL PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	FUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1947 	DUS PEAK 17-58 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU-	BASED DISCHAR	ON PERIO	OD OF REC CFS, FOR , IN YEA E PROBABI	INDICATE RS, AND	7-58 D RECUF ANNUAL PERCEN	RRENCE
MAGNIT DISCHARGE, YEARS, A	FUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS OD OF REC CATED REC NCE PROBA	STANTANEC CORD 1947 	DUS PEAK 17-58 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAP  E)  2  50%	ON PERIO	DD OF REC CFS, FOR , IN YEA E PROBABI 10 10%	INDICATE RS, AND LITY, IN	7-58 D RECUF ANNUAL PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1947 	DUS PEAK 17-58 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAFE)  2 50%	ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PERIOR ON PER	OD OF REC CFS, FOR , IN YEA E PROBABI 10 10%	INDICATE RS, AND LITY, IN	7-58 D RECUFANNUAL PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1947 	DUS PEAK 17-58 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAP  2 50%  322 239	RGE, IN CONTROL OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT	DD OF REC CFS, FOR , IN YEA PROBABI 10 10%	INDICATE RS, AND LITY, IN 25 4%	7-58 D RECUF	RRENCE
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MAGNIT DISCHARGE, YEARS, A 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1947 	DUS PEAK 17-58 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAF  E> 2 50%  322 239 153 98	ON PERIO RGE, IN ( INTERVAL (CEEDANCE 5 20% 523 364 225 145	OD OF REC CFS, FOR , IN YEA PROBABI 10 10% 611 414 254 166	INDICATE RS, AND LITY, IN 25 4%	7-58 D RECUF	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	FUDE AND BASE  , IN CFS, AND ANNUA  2  50%	PROBABILII D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1947 	DUS PEAK 17-58 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAR  E)  2  50%  322  239  153	RGE, IN COUNTRY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT	DD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF	INDICATE RS, AND LITY, IN 25 4%	7-58 D RECUFANNUAL PERCEN 50 2%	RRENCE

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1947-58

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	D PERCEN	NT OF TIM	IE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
63	38	28	21	16	13	8.2	5.2	3.6	2.6	2.2	2.0	1.8	1.6	1.4

## 14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR

LOCATION.--Lat 45°21'15", long 123°24'20", in SEtNEt sec.16, T.37 S., R.6 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.5 mi downstream from Jackson Creek, 3.6 mi southeast of Wilderville, and at mile 7.6.

DRAINAGE AREA .-- 698 mi2.

PERIOD OF RECORD. -- October 1938 to September 1955, September 1978 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 947.18 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Sept. 1, 1978, nonrecording gage at site 1,100 ft upstream at datum 2.36 ft higher.

REMARKS.--Flow regulated since December 1980 by Applegate Lake. Many diversions for irrigation above station. Wilderville ditch diverts up to 16 ft<sup>3</sup>/s 0.3 mi upstream and at the mouth of Jackson Creek.

AVERAGE DISCHARGE.--21 years (water years 1939-55, 1979-82), 733 ft3/s, 531,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,500 ft<sup>3</sup>/s Jan. 18, 1953, gage height, 18.3 ft from floodmark, site and datum then in use, from rating curve extended above 12,000 ft<sup>3</sup>/s as explained below; minimum, 0.78 ft<sup>3</sup>/s Aug. 22-24, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1955, reached a stage of 20.3 ft from floodmark, former site and datum, discharge,  $66,500 \text{ ft}^3/\text{s}$ , from rating curve extended above 12,000 ft $^3/\text{s}$  on basis of slope-area measurement of peak flow.

Flood of February 1927 reached a stage of 22 ft at former site, from local resident. Floods of Dec. 22, 1964, and Jan. 15, 1974, are known to have exceeded the December 1955 flood.

No flow was observed at present site during the late summer of 1977.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1939-80 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1940-80

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	Ͻ <b>Ň</b> −
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2%	100 1%
OCTOBER	34	1840	213	401	1.88	2.5	1	8.5	3.3	2.0	1.3		
NOVEMBER	55	1920	482	467	•97	5.6	3	9.4	3.8	2.4	1.6		
DECEMBER	167	3117	1013	895	.88	11.7	7	10	4.3	2.8	2.0		
JANUARY	297	4743	1636	1309	.80	18.9	14	11	4.9	3.2	2.3		
FEBRUARY	394	3179	1527	920	.60	17.7	30	13	6.1	4.2	3.1		
MARCH	415	2430	1094	481	.44	12.7	60	21	11	7.6	5.7		
APRIL	448	2085	1078	428	.40	12.5	90	30	17	13	10		
MAY	294	1893	953	414	.43	11.0	120	52	32	25	20		
JUNE	99	1456	487	345	.71	5.6	183	165	94	67	50		
JULY	22	399	98	94	.95	1.1							
AUGUST	5.2	116	26	27	1.05	.3							
SEPTEMBER	3.5	156	40	37	.92	.5							
ANNUAL	264	1311	716	320	.45	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1939-80

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4860	12500	30600	48000	76500									
							1	7470	15500	22500	33200		
VE I GHTE	D SKEW =	182					3	5740	11400	15900	22400		
							7	4170	7490	9830	12800		
							15	2960	4940	6280	7940		
							30	2210	3580	4520	5710		_
							60	1750	2710	3350	4130		_
							90	1540	2310	2800	3380		_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-80

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2410	1620	1330	1120	959	814	564	<b>35</b> 8	208	113	79	53	34	21	9.2

## 14370000 SLATE CREEK AT WONDER, OR

LOCATION.--Lat 42°21'40", long 123°31'10", in SW‡ sec.10, T.37 S., R.7 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.6 mi upstream from Elliot Creek and 0.7 mi east of Wonder.

DRAINAGE AREA. -- 31.4 mi2.

5%

364

10%

212

146

109

86

68

PERIOD OF RECORD.--July to November 1913, October 1943 to September 1957, water years 1958-60 (annual maximum). October 1943 to September 1945 monthly discharge only, published in WSP 1318.

GAGE.--Crest-stage gage. Datum of gage is 1,034.85 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1946, staff gage at several sites within 0.5 mi of described site at various datums. Nov. 21, 1946, to Sept. 30, 1957, water-stage recorder at present site and datum.

REMARKS.--No regulation. Several small diversions above station for irrigation.

AVERAGE DISCHARGE.--14 years (water years 1944-57), 80.9 ft3/s, 58,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft<sup>3</sup>/s Oct. 29, 1950, gage height, 9.72 ft, from rating curve extended above 2,100 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 8.29 and 9.72 ft; minimum discharge, 0.2 ft<sup>3</sup>/s Aug. 25, 1957.

# STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	CFS, FOR IN YEARS E PROBAB	S, AND A	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL	2.2 6.5 28 30 67 81 27 12 5.9 2.1 1.0 1.1	213 195 581 546 316 247 202 91 39 10 4.7 3.9	30 78 181 266 199 143 76 35 13 4.9 2.3 2.2	61 68 165 179 75 56 48 24 8.9 2.5 1.1 .9	2.02 .87 .91 .67 .38 .39 .63 .68 .67 .51 .49 .43	2.9 7.6 17.6 25.8 19.3 13.9 7.4 3.4 1.3 .5 .2 .2	1 3 7 14 30 60 90 120 183	.9 1.0 1.2 1.3 1.5 1.8 2.3 3.2 7.0	.7 .8 .9 1.0 1.1 1.4 1.7 2.3 4.7	.6 .7 .8 .8 .9 1.2 1.4 2.0 3.9	.6 .6 .7 .7 .8 1.0 1.3 1.7 3.4		
MACALLE	TIDE AND	DDODADILL	TV 0E 1110	TANTANE	NIC DEAK	EL OW	140.0	CALLTURE A	ND DDADA	DIL LTV 00	ANIARIAA	LIICH EI	OM.
DISCHARGE,	BASE IN CFS,	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	OD OF REC	CORD 1944 CURRENCE	I-60 INTERVAL	. IN	PERIOD	DISCHA	ON PERI	OD OF REC CFS, FOR L, IN YEA	CORD 194 INDICATE	16-57 ED RECUF ANNUAL	RENCE
DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF REC	CORD 1944 CURRENCE	INTERVAL	. IN		BASED DISCHA	ON PERI	OD OF REC	CORD 194 INDICATE	16-57 ED RECUF ANNUAL	RENCE

40%

40

22

60%

11

70%

5.8

75% 80%

3.2

4.3

85% 90% 95%

1.9

1.4

2.5

# 14371500 GRAVE CREEK AT PEASE BRIDGE, NEAR PLACER, OR

LOCATION.--Lat 42°38'30", long 123°12'40", in SEt sec.6, T.34 S., R.4 W., Jackson County, Hydrologic Unit 17100310, on right bank 0.5 mi downstream from Pease Bridge, 0.5 mi upstream from Boulder Creek, 5.4 mi east of Placer, and at mile 27.1.

DRAINAGE AREA.--22.1 mi<sup>2</sup> at measuring site 0.5 mi upstream.

PERIOD OF RECORD.--October 1940 to September 1982. Prior to October 1945 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 2,354.2 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Aug. 4, 1955, at sites 0.5 mi upstream at datum 29.9 ft higher.

REMARKS.--No regulation. One small diversion above station. Prior to 1945, Columbia upper ditch diverted water about 2 mi above station, bypassing station. Records herein are for measuring site.

AVERAGE DISCHARGE.--37 years, 59.1 ft<sup>3</sup>/s, 36.32 in/yr, 42,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.20 ft, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 9.66 ft; minimum, 0.12 ft<sup>3</sup>/s July 15, 1970.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1946-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	1.2	163	13	28	2.16	1.8	1	.7	•5	.4	.3	.3	
NOVEMBER	3.0	307	62	61	1.00	8.6	3	.7	.5	.4	.3	.3	
DECEMBER	3.2	415	120	105	.88	16.8	7	.8	.5	.4	.4	•3	
JANUARY	5.6	427	144	104	•72	20.2	14	.8	•5	.4	.4	.3	
FEBRUARY	8.3	<b>2</b> 93	129	66	.51	18.1	30	.9	.6	.5	.5	.4	
MARCH	37	216	109	52	.48	15.3	60	1.2	.8	.7	.6	.5	
APRIL	<b>2</b> 5	215	80	44	.54	11.3	90	1.6	1.1	1.0	.9	.8	
MAY	8.7	100	37	<b>2</b> 2	• 59	5.2	120	2.4	1.8	1.5	1.4	1.2	
JUNE	4.5	52	12	7.9	.68	1.6	183	6.3	4.4	3.7	3.2	2.7	
JULY	1.1	9.3	3.7	1.8	.49	.5							
AUGUST	.5	5.1	1.7	1.1	.66	.2							
SEPTEMBER	.5	7.6	1.8	1.3	.73	•3							
ANNUAL	11	122	59	23	.38	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-82

ISCHARGE, YEARS, AI							PERIOD (CON-		INTERV	/AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
949	1650	2810	3680	4890	5860								
							1	1100	1840	2260	2720	3000	
WE I GHTED	SKEW =	121					3	733	1200	1480	1790	1990	
							7	476	742	898	1070	1180	
							15	313	464	550	643	702	
							30	237	332	381	431	460	
							60	181	253	289	<b>32</b> 6	347	
							90	155	211	239	266	282	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
231	150	111	86	67	54	34	18	9.0	4.4	3.2	2.3	1.7	1.3	.9

## 14372300 ROGUE RIVER NEAR AGNESS, OR

LOCATION.--Lat 42°34'50", long 124°03'30", in NEtNWt sec.6, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100310, on left bank 0.8 mi upstream from Shasta Costa Creek, 1.5 mi north of Agness, 2.6 mi upstream from Illinois River, and at mile 29.7.

DRAINAGE AREA. -- 3,939 mi2.

PERIOD OF RECORD. -- October 1960 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 113.81 ft National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Public

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake, since December 1980 by Applegate Lake. Slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation and mining.

AVERAGE DISCHARGE.--22 years, 6,149 ft<sup>3</sup>/s, 4,455,000 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1961-76

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290,000 ft<sup>3</sup>/s Dec. 23, 1964, from slope-area measurement; maximum gage height, 68.03 ft Dec. 23, 1964, from floodmark (backwater from !!linois River); minimum discharge, 608 ft3/s July 9, 10, 1968.

STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YEA	OR INDICA ARS, AND ABILITY,	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	1320	5070	1909	894	.47	2.4	1	1100	901	811	742		
NOVEMBER	1721	20240	5502	4424	.80	6.9	3	1110	919	829	759		
DECEMBER	4186	43980	11530	9717	.84	14.5	7	1130	938	847	776		
JANUARY	3286	32610	16200	10280	.63	20.3	14	1160	958	863	791		
FEBRUARY	4774	19070	11240	4042	.36	14.1	30	1190	982	886	812		
MARCH	5289	25590	11500	6472	.56	14.4	60	1250	1050	956	884		
APRIL	3341	14020	7737	3164	.41	9.7	90	1320	1110	1010	933		
MAY	2548	11310	6024	2324	. 39	7.6	120	1440	1210	1100	1010		

0.1110.1111	2200	22010	10200	10200	•02	2017	1 - 7	1100	,,,,	002
FEBRUARY	4774	19070	11240	4042	•36	14.1	30	1190	982	886
MARCH	5289	25590	11500	6472	.56	14.4	60	1250	1050	956
APRIL	3341	14020	7737	3164	.41	9.7	90	1320	1110	1010
MAY	2548	11310	6024	2324	.39	7.6	120	1440	1210	1100
JUNE	1485	6128	3543	1413	.40	4.5	183	2020	1670	1530
JULY	864	2738	1741	526	.30	2.2				
AUGUST	877	2149	1347	346	. 26	1.7				
SEPTEMBER	935	1799	1336	243	.18	1.7				
ANNUAL	3454	11990	6623	2241	.34	100				
ANNUAL	3454	11990	6623	2241	.34	100				

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-76

MAGNITUDE AND PROBABILITY OF ANNUÁL HIGH FLOW BASED ON PERIOD OF RECORD 1961-76

1420

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-76

		•		RECURRENC ROBABILIT			PERIOD (CON-	DISC	INTER	RVAL, IN	OR INDICA YEARS, AN	D ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 <b>4%</b>	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100 1%
59600	107000	182000	234000	301000									
							1	87500	148000	191000	246000		
WE I GHT	ED SKEW	=387					3	63600	112000	151000	207000		
							7	43400	75500	102000	140000		
							15	28800	46800	60600	80300		
							30	19800	30200	38200	49600		
							60	15900	23200	28500	35900		
							90	13700	19300	23300	28500		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-76

	ספוע	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	ME		
5% 10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
20900 13700	10500	8750	7470	6440	5140	3860	2600	1860	1660	1520	1370	1210	1060

# 14372500 EAST FORK ILLINOIS RIVER NEAR TAKILMA, OR

LOCATION.--Lat 42°00'10", long 123°37'30", in SEtNEt sec.15, T.41 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 0.3 mi downstream from Dunn Creek (California-Oregon State line), 3.4 mi south of Takilma, and at mile 71.2.

DRAINAGE AREA. -- 42.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April to September 1926, April 1927 to April 1932, October 1940 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Records prior to 1942 water year not equivalent owing to large diversions.

GAGE.--Water-stage recorder. Altitude of gage is 1,780 ft, from topographic map. Prior to Oct. 31, 1946, nonrecording gage at sites 0.6 mi downstream at different datums. Oct. 31, 1946, to May 13, 1949, nonrecording gage and May 14, 1949, to Aug. 23, 1965, water-stage recorder at site 0.6 mi downstream at datum 1,746.6 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Two small diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years (water years 1942-82),  $178 \text{ ft}^3/\text{s}$ , 57.15 in/yr, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.90 ft, present site and datum, from floodmark, from rating curve extended above 4,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 4.6 ft<sup>3</sup>/s Nov. 3, 1960.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1942-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1943-82

	44751154154			STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBAB	S, AND AN	NNUAL NO	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	8.3	469	52	86	1.67	2.4	1	8.1	6.9	6.4	6.1	5.8	5.6
NOVEMBER	12	873	209	180	-86	9.7	3	8.2	7.0	6.5	6.1	5.8	5.6
DECEMBER	12	1511	359	309	.86	16.7	7	8.5	7.3	6.8	6.4	6.1	5.9
JANUARY	22	1036	388	248	-64	18.1	14	8.8	7.5	7.0	6.7	6.3	6.1
FEBRUARY	37	969	332	181	.55	15.5	30	9.5	8.1	7.6	7.3	6.9	6.7
MARCH	85	606	264	137	.52	12.3	60	11	9.2	8.6	8.2	7.8	7.6
APRIL	74	437	236	96	.41	11.0	90	12	11	9.9	9.4	9.0	8.7
MAY	44	382	185	88	.48	8.6	120	15	13	12	11	10	9.6
JUNE	31	228	72	39	.55	3.4	183	38	26	22	18	15	13
JULY	13	55	23	8.6	• 37	1.1							
AUGUST	7.8	21	13	3.0	.23	.6							
SEPTEMBER	7.1	41	13	6.2	• 50	.6							
ANNUAL	40	315	178	60	.34	100							

MAGNITUDE	AND PRO	DBABILITY	0F	INSTANT	ANEOUS	PEAK	FLOW
	BASED (	ON PERIOD	0F	RECORD	1942-82	2	

- 1	MAGNITUDE	AND	PROBABIL	LITY	OF A	NNUAL	HIGH	FLOW
	BASI	ED O	N PERIOD	OF	RECOR	D 194	12-82	

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	CFS, FO	EARS, AN	D ANNUAL	
1.25 80%	2 50% 	5 20%	10 10% 	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
2870	4310	6380	7800	9630	11000	12400		7040					
WEIGHTED	SKEW -	_ 110					1 7	3010 2090	4720 3220	5780 3880	7010 4600	7850 5060	8620 5470
WEIGHTED	SILLI -	110					7	1360	2080	2490	2940	3220	3470
							15	867	1310	1560	1840	2020	2180
							30	609	892	1050	1220	1330	1430
							60	482	690	806	928	1000	1070
							90	417	579	664	753	806	851

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1942-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
642	396	295	239	199	169	122	80	44	22	18	15	13	11	9.2

80%

38

85%

34

90% 95%

27

31

#### 14375000 SUCKER CREEK NEAR HOLLAND, OR

LOCATION.--Lat 42°09'00", long 123°27'50", in NEt sec.25, T.39 S., R.7 W., Josephine County, Hydrologic Unit 17100311, on right bank 1.3 mi downstream from Grayback Creek and 4 mi northeast of Holland.

DRAINAGE AREA .-- 76.2 mi2.

5%

10%

488

399

20%

338

25%

290

30%

185

120

78

52

44

250

PERIOD OF RECORD.--April to August 1940, September 1941 to September 1965. Prior to October 1945 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,777.22 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Sept. 16, 1947, staff gage at several sites within 0.5 mi of present site at various datums. Sept. 16, 1947, to Sept. 19, 1952, staff gage at site 280 ft upstream at datum 0.62 ft higher.

REMARKS.--No regulation. Grayback Canal and 3 small diversions from Grayback and Cave Creeks divert water for domestic use and irrigation above station. Most of return flow from these diversions enters creek above station.

AVERAGE DISCHARGE.--24 years (water years 1942-65), 212 ft3/s, 153,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 9.28 ft, from floodmark, from estimate of peak based on slope-area survey; minimum observed, 17 ft<sup>3</sup>/s Sept. 29 to Oct. 3, 1941.

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	OR INDICAT ARS, AND A ABILITY, I	ANNUAL NO	-ис
нтиом	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER NOVEMBER DECEMBER	26 25 30	312 391 1016	66 138 298	73 95 272	1.10 .69 .91	2.5 5.3 11.4	1 3 7	25 26 26	22 22 23	21 21 22	20 20 - 21	 	 
JANUARY FEBRUARY JARCH	77 117 95	921 1248 610	365 409 311	275 247 120	.75 .60 .39	14.0 15.7 11.9	14 30 60	27 28 31	24 25 27	22 23 25	21 22 24	 	 
APRIL MAY JUNE	69 105 88	594 691 361	364 340 176	125 145 80	.34 .43 .45	14.0 13.1 6.8	90 120 183	34 39 69	30 33 50	28 30 42	27 28 36	 	
		136	66	24	.36	2.5							
JULY AUGUST SEPTEMBER	41 28 23	57 40	39 31	8.5 5.1	. 22	1.5							
AUGUST	28	57	39		. 22	1.5							
MAGNI DISCHARGE YEARS,	28 23 86 TUDE AND BASE , IN CFS,	57 40 339 PROBABILI' D ON PERIO FOR INDIO L EXCEEDA	39 31 216 TY OF IN OD OF RE CATED RE	5.1 70 ISTANTANE CORD 194	.22 .16 .33 OUS PEAK F 2-65	1.5 1.2 100 	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R CFS, FO AL, IN Y	OF ANNUAL ECORD 19 R INDICAT EARS, AND BILITY, I	246-65 ED RECUR	RENCE
MAGN I	28 23 86 TUDE AND BASE	57 40 339 PROBABILI D ON PERIO	39 31 216 TY OF IN OD OF RE	70  STANTANE CORD 194	.22 .16 .33 OUS PEAK F 2-65	1.5 1.2 100 	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R CFS, FO AL, IN Y	ECORD 19 R INDICAT	246-65 ED RECUR	RENCE
MAGNI  SCHARGE YEARS, 1	28 23 86 TUDE AND BASE , IN CFS, AND ANNUA	57 40 339 PROBABILI' D ON PERIO FOR INDIO L EXCEEDAI	39 31 216 TY OF IN OD OF RE CATED RE NCE PROB	5.1 70 ISTANTANE CORD 194 CURRENCE ABILITY, 25	.22 .16 .33 OUS PEAK F 2-65 INTERVAL, IN PERCEN	1.5 1.2 100 	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, I	ED RECUF ANNUAL N PERCEN	RRENCE

## 14375100 SUCKER CREEK BELOW LITTLE GRAYBACK CREEK, NEAR HOLLAND, OR

LOCATION.--Lat 42°09'35", long 123°28'40", in NE‡SW¼ sec.24, T.39 S., R.7 W., Josephine County, Hydrologic Unit 17100311, on right bank 500 ft downstream from Little Grayback Creek, 2.0 mi downstream from Grayback Creek, 3.7 mi northeast of Holland, and at mile

DRAINAGE AREA .-- 83.9 mi2.

PERIOD OF RECORD. -- October 1965 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,713.92 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Grayback Canal and 3 small diversions from Grayback and Cave Creeks divert water for domestic use and irrigation above station. Return flow from these diversions enters creek above station.

AVERAGE DISCHARGE.--17 years, 240 ft<sup>3</sup>/s, 38.85 in/yr, 173,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.---Maximum discharge, 8,550 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 8.20 ft; minimum, 12 ft<sup>3</sup>/s Oct. 20, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1940, 10.8 ft on Dec. 22, 1964, from floodmark, discharge, 19,300 ft<sup>3</sup>/s, from estimate based on slope-area measurement of peak flow at site 0.7 mi upstream.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1966-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-82

	MININUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN INTERVAL EXCEEDANG	, IN YEAR	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	22	89	44	17	.40	1.5	1	23	18	16	14 -		
NOVEMBER	31	911	195	221	1.13	6.8	3	24	18	16	14		
DECEMBER	31	1191	353	303	.86	12.3	7	24	18	16	14		
JANUARY	36	1153	504	333	.66	17.5	14	25	19	16	14		
FEBRUARY	43	918	388	207	.53	13.5	30	27	21	19	17		
MARCH	93	953	408	219	•54	14.2	60	30	25	22	20		
APRIL	101	700	349	177	.51	12.1	90	33	28	25	24		
MAY	105	617	329	171	.52	11.4	120	37	32	30	28		
JUNE	63	345	167	99	.59	5.8	183	60	46	41	38		
JULY	29	128	67	28	.42	2.3							
AUGUST	18	58	40	11	.28	1.4							
SEPTEMBER	21	61	34	9.9	.29	1.2							
ANNUAL	54	463	239	112	.47	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1966-82

DISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, IN Y	R INDICAT EARS, AND	ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1900	3370	5610	7150	9120									
WEIGHTED	SKEW =	399					1 3 7	2510 1930 1360	4440 3440 2340	5620 4320 2890	6930 5230 3460		
							15 30	931 677	1530 1050	1850 1250	2190 1450		
							60 90	556 497	832 739	977 868	1120 999		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-82

 		DISCH	ARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 754	547	438	370	309	265	188	127	78	51	43	38	33	30	26

## 14375500 WEST FORK ILLINOIS RIVER BELOW ROCK CREEK, NEAR O'BRIEN, OR

LOCATION.--Lat 42°02'20", long 123°44'50", in SW±SE± sec.34, T.40 S., R.9 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on left bank 0.2 mi downstream from Rock Creek, 3.0 mi southwest of O'Brien, and at mile 12.8.

DRAINAGE AREA .-- 42.4 mi2.

976

558

379

281

218

172

102

55

30

16

12

9.2

7.4

6.0

4.8

PERIOD OF RECORD.--September 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,516.14 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Three small diversions from Elk Creek for irrigation above station.

AVERAGE DISCHARGE.--28 years (water years 1955-82), 216 ft<sup>3</sup>/s, 69.18 in/yr, 156,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.05 ft, from rating curve extended above 6,200 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 14.79 ft; minimum, 1.5 ft<sup>3</sup>/s Sept. 2-4, 1974.

	ONTHLY AN												
	MINIMUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	NTERVAL,	IN YEAR	RS, AND	TED RECUR ANNUAL NO IN PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL	4.7 17 12 49 86 86 47	300 1315 1616 1176 1112 801 767	51 294 511 518 450 394 230	66 273 386 296 239 203	1.29 .93 .76 .57 .53 .52	2.0 11.3 19.6 19.9 17.3 15.1 8.8	1 3 7 14 30 60 90	4.1 4.3 4.5 4.7 5.1 6.1 7.3	3.1 3.3 3.4 3.6 4.0 4.6 5.6	2.6 2.7 2.9 3.1 3.5 4.0 4.9	2.3 2.4 2.5 2.7 3.1 3.5 4.5	1.9 2.1 2.3 2.7 3.0	
MAY JUNE JULY AUGUST SEPTEMBER	32 15 6.6 3.3 3.0	302 66 18 17 64	99 28 12 7.0 11	79 9.8 3.3 2.9 12	.80 .35 .28 .41	3.8 1.1 .5 .3	120 183	9.5 22	7.4 15 	6.6 12	6.1 10	5.6 8.8 	
	49 	407  PROBABILI	216  TY OF INS	79  STANTA <b>NE</b> (	.37 	100 	 MAG		 ND PROBA	 BILITY 0	F ANNUA	 L HIGH FL	 OW
MAGNI DISCHARGE, YEARS, /	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INS	STANTANEC CORD 1955 CURRENCE ABILITY,	DUS PEAK I 5-82 INTERVAL IN PERCEI	FLOW , IN	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RECEIVED	CORD 1	955-82  TED RECUR	 RENCI
MAGNIT	FUDE AND BASE	PROBABILI D ON PERIO	TY OF INS	STANTANEC CORD 1955	DUS PEAK I 5-82 INTERVAL IN PERCEI	FLOW	PERIOD	BASED DISCHA	ON PERI	OD OF RECEIVED	CORD 1	955-82  TED RECUR D ANNUAL	RENCI
DISCHARGE, YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 1955 CURRENCE ABILITY, 25 4%	DUS PEAK I 5-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASED DISCHA E	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RECEIVED	INDICA ARS, AN	955-82 TED RECUR D ANNUAL IN PERCEN	100 1;
MAGNITOLISCHARGE, YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILITO NO PERIODE FOR INDICE EXCEEDAN 5 20%	TY OF IN.  CATED REC  CATED REC  10  10  10  2280  11	STANTANECORD 195:  DURRENCE ABILITY,  25 4%	DUS PEAK IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  3590 2650 1750 1160 851 680 579	ON PERI  RGE, IN 1  INTERVA  XCCEDANC  5  20%  5310  3800  2510  1650  1170  942  783	OD OF RECOME A STATE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PROBABLE OF THE PR	100 100 100 100 100 100 100 100 100 100	955-82 TED RECUR D ANNUAL IN PERCEN 50 2% 9260 6140 3990 2560 1730 1320	100 17
MAGNITOLISCHARGE, YEARS, /	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILITO ON PERIOD ON PERIOD ON PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF PERIOD OF P	TY OF IN: DD OF REC CATED REC NCE PROB/ 10 10%	STANTANEC CORD 1955 CURRENCE ABILITY, 25 4% 1500 13	DUS PEAK I 5-82 INTERVAL IN PERCEI 50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  3590 2650 1160 851 680 579  OF RECOR	ON PERI RGE, IN PINTERVA XCEEDANC  520%  5310 3800 2510 1650 1170 942 783  D 1955-8:	OD OF RECOME AND ADDRESS OF REAL AND ADDRESS OF REAL AND ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRESS OF REAL ADDRE	8060 5470 2310 1580 1230 981	955-82 TED RECUR D ANNUAL IN PERCEN 50 2% 9260 6140 3990 2560 1730 1320	 RENCE

#### 14377000 ILLINOIS RIVER AT KERBY, OR

LOCATION.--Lat 42°11'50", long 123°39'30", in NW¼ sec.9, T.39 S., R.8 W., Josephine County, Hydrologic Unit 17100311, on upstream side of Finch Bridge and 0.5 mi west of Kerby.

DRAINAGE AREA .-- 364 mi2.

ANNUAL

576

2088

PERIOD OF RECORD. -- March 1926 to September 1961. Monthly discharge only March 1926, published in WSP 1318.

GAGE.--Wire-weight gage read once or twice daily. Datum of gage is 1,232.00 ft National Geodetic Vertical Datum of 1929. Prior to May 9, 1928, staff gage at site 0.5 mi upstream at different datums. May 9, 1928, to Nov. 2, 1934, staff gage at present site at different datums. Nov. 3, 1934, to Sept. 30, 1950, water-stage recorder at site 1 mi downstream at datum 16.76 ft lower. Oct. 1, 1950 to Dec. 28, 1958, staff gage at present site at datum 2.00 ft higher.

REMARKS.--No regulation. Diversions for irrigation of 5,500 acres above station. Some diversions for mining during winter months.

AVERAGE DISCHARGE.--35 years (water years 1927-61), 1,209 ft<sup>3</sup>/s, 875,300 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1927-61

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 56,800 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 16.4 ft, present datum, from floodmark, from rating curve extended above 9,600 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 15.7 ft, present datum; minimum observed, 9.6 ft<sup>3</sup>/s Aug. 16, 1959.

#### STATISTICAL SUMMARIES

DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-COEFFI-PERCENT PERIOD DARD DEVIA-CIENT OF (CON-EXCEEDANCE PROBABILITY, IN PERCENT 0F MINIMUM MAXIMUM MEAN TION VARI-ANNUAL SECU-MONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 100 20% 10% DAYS) 50% 54 28 1% OCTOBER 589 2.05 2.0 27 19 15 13 10 29 3363 287 NOVEMBER 40 948 .80 8.1 28 20 13 3041 1188 3 16 11 DECEMBER 183 7305 2246 1653 .74 15.4 29 20 17 14 12 JANUARY 293 7375 2778 1783 19.0 30 22 13 --.64 18 16 FEBRUARY 703 7833 2797 19.2 32 1622 .58 23 20 17 15 MARCH 711 5499 2101 1053 .50 14.4 60 36 26 22 20 17 \_\_ APRIL 455 3753 1580 698 .44 10.8 an 42 31 26 23 21 \_\_ MAY --199 2136 1001 521 .52 6.9 120 58 41 30 25 JUNE 98 425 272 .64 1274 2.9 183 190 111 81 61 44 .58 JULY 38 296 107 62 .7 AUGUST 23 .51 16 127 45 .3 SEPTEMBER 40 15 .38 .3 17 77

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1927-61

1209

419

.35

100

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1927-61

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1928-61

					NCE INTER		PERIOD (CON-	DISC	INTER	VAL, ÍN '	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
15600	25000	38100	46600	56900	64200								
							1	18000	27800	34200	42300	48100	
WEIGHTE	D SKEW :	403					3	12900	19600	23700	28600	31800	
							7	8860	13100	15500	18300	20100	
							15	6050	8610	10100	11700	12800	
							30	4230	6120	7370	8910	10000	
							60	3380	4770	5620	6620	7310	
							90	2910	4060	4780	5640	6240	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1927-61

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	T OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4570	2870	2160	1740	1440	1220	845	540	261	101	72	56	44	37	29

## 14377100 ILLINOIS RIVER NEAR KERBY, OR

LOCATION.--Lat 42°13'55", long 123°39'45", in SE‡SE‡ sec.29, T.38 S., R.8 W., Josephine County, Hydrologic Unit 17100311 , Siskiyou National Forest, on right bank 1.6 mi upstream from Josephine Creek, 2.5 mi northwest of Kerby, and at mile 50.3.

DRAINAGE AREA .-- 380 mi2.

5370

3210

2310 1790

1480

1230

832

536

267

119

89

67

52

42

32

PERIOD OF RECORD. -- October 1961 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,198.8 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 28, 1965, water-stage recorder, and Jan. 28 to Sept. 30, 1965, nonrecording gage 700 ft downstream at datum 2.99 ft lower.

REMARKS.--No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--21 years, 1,312 ft<sup>3</sup>/s, 46.89 in/yr, 950,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 45.28 ft, from floodmark, site and datum then in use, from rating curve extended above 30,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 14 ft<sup>3</sup>/s Aug. 11, 13, 14, 1977.

5%	10%	15%	20%	25%	30%	40% 50	<b>60%</b>	70%	75%	80%	85%	90%	95
		DISCHA	RGE, IN	CFS, WHI	CH WAS EQ	JALED OR E	XCEEDED FO	R INDICA	TED PERC	ENT OF I	IME		
			DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	ORD 1962-	82			
							90	3870 3350	5390 4530	6140 5050	6840 5510		
							30 60	4820	6740	7740	8750		
							15	6450	9750	11800	14200		
							7	9770	15200	18600	22500		
WEIGHTED	SKEW =	.193					3	14500	22600	<b>2</b> 76 <b>0</b> 0	33600		-
							1	20500	31400	37700	44700		-
17900	26300	39400 4	9100 6	2500									
	JUB 	20 <i>1</i> 6	10%	4 <i>5</i> 		1,6	DAYS)	∠ 50 <b>%</b>	20%	10%	4%	2%	1
1 • 25 80 <b>%</b>	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE	2	 5	10	25	50	10
1 25		 c		25	<del>-</del>	100	(CON-		EXCEEDA	ICE PROB	BILITY, I	N PERCEN	11
YEARS, A	ND ANNUA	L EXCEEDA	NCE PROB	ABILITY,	IN PERCE	NT	PERIOD				EARS, AND		
					INTERVAL			DISCH			R INDICAT		RENC
MAGNIT		PROBABILI D ON PERI			OUS PEAK   2-82	FLOW	MA				OF ANNUAL RECORD 19		.ow
NNUAL	275 	2372	1312	511 	.39	100							
EPTEMBER	27	358	69	73	1.07	.4							
UGUST	21	116	48	22	.45	.3							
ULY	41	206	91	40	.43	•6							
UNE	134	646	317	152	. 48	2.0	183	181	135	119	108		-
IAY	321	2439	932	546	. 59	5.9	120	67	53	48	45		_
PRIL	433	4518	1649	1003	.61	10.4	90	48	36	32	29		_
IARCH	863	4757	2247	1158	.52	14.2	60	41	31	26	23		_
EBRUARY	358	4419	2402	1092	.45	15.2	30	35	27	24	21		_
IANUARY	236	7184	3154	1861	.74	20.0	14	33	26	22	20 -		_
IOVEMBER DECEMBER	128 115	6344 9242	1641 2952	1521 2189	.93 .74	10.4 18.7	3 <b>7</b>	31 32	24 25	21	18 19		_
CT0BER	42	1771	287	382	1.33	1.8	1	30	23	19 20	17		-
IONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	10 1
	MUMINIM		MEAN	TION	VARI-	ANNUAL	SECU-						
				DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	0130	INTERVA	L, IN YE.	ARS, AND A	NNUAL NO	ON-
				STAN-				חופר	HARGE I	N CES E	OR INDICAT	ED BECH	RRFNC
								DAG	LD ON 1 L	1100 01	RECORD 19	05 02	

## 14377500 DEER CREEK NEAR DRYDEN, OR

LOCATION.--Lat 42°15'50", long 123°27'00", near center of sec.18, T.38 S., R.6 W., Josephine County, Hydrologic Unit 17100311, on left bank 500 ft downstream from confluence of North and South Forks and 5 mi east of Dryden.

DRAINAGE AREA .-- 22.0 mi2.

PERIOD OF RECORD.--December 1941 to September 1956. Monthly discharge only for December 1941 to September 1945, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,650.10 ft National Geodetic Vertical Detum of 1929 (levels by Bureau of Reclamation). Prior to Sept. 12, 1946, staff gage at same site at datum 1.26 ft higher.

REMARKS. -- No regulation. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--14 years (water years 1943-56), 74.1 ft3/s, 53,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 5,000 ft<sup>3</sup>/s Jan. 18, 1953, gege height, 7.61 ft, backwater from logs; maximum gage height, 7.92 ft Oct. 29, 1950; minimum discharge, 0.9 ft<sup>3</sup>/s Sept. 20-24, 1951, Sept. 6-10, 1955.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1946-56 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-56

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	0 <b>N-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	1.6	226	30	66	2.25	3.2	1	1.4	1.1	.9	.9		
NOVEMBER	3.4	195	82	69	.84	8.8	3	1.4	1.1	.9	.9		
DECEMBER	21	488	156	145	.93	16.8	7	1.5	1.1	1.0	.9		
JANUARY	29	510	212	153	.72	22.9	14	1.6	1.2	1.1	1.0		
FEBRUARY	56	315	146	72	.49	15.7	30	1.9	1.4	1.2	1.1		
MARCH	69	192	106	37	.35	11.4	60	2.3	1.7	1.4	1.3		
APRIL	52	162	100	40	.40	10.8	90	2.8	2.0	1.7	1.5		
MAY	11	111	62	35	•57	6.7	120	3.9	2.7	2.3	2.0		
JUNE	7.8	68	23	17	•77	2.4	183	9.4	5.9	4.8	4.1		
JULY	3.2	12	7.0	3.5	• 50	.8							
AUGUST	1.6	6.1	3.3	1.6		. 4							
SEPTEMBER	1.4	3.7	2.3	.7	.32	.2							
ANNUAL	38	128	77 ′	29	.37	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1946-56

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-56

DISCHARGE, YEARS, A			DICATED F				PERIOD (CON-		INTERV	CFS, FOF AL, IN YE	ARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1240	2140	3610	4720							7.00			
WEIGHTED	SKEW =	113					3	1480 1030	2460 1680	3120 2090			
							7	668	1050	1270			
							15 30	428 287	673 456	821 575			
							60	221	332	405			
							90	188	274	327			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-56

 		DISCH	ARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	T OF TIM	IE		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
289	168	124	102	84	70	48		14	6.4				2.3	• • •

14378000 ILLINOIS RIVER NEAR SELMA, OR

241

LOCATION.--Lat 42°22'45", long 123°48'40", in SW± sec.6, T.37 S., R.9 W., Josephine County, Hydrologic Unit 17100311, on right bank 0.1 mi upstream from Panther Creek, 0.2 mi downstream from Briggs Creek, 12 mi northwest of Selma, and at mile 32.3.

DRAINAGE AREA. -- 665 mi<sup>2</sup>, includes that of Panther Creek.

PERIOD OF RECORD. -- October 1956 to January 1968.

5%

9670

10%

4050

5910

20%

2430

3060

30%

2010

40%

1350

50%

903

471

209

75%

160

133

85%

112

90%

94

95%

81

GAGE.--Water-stage recorder. Datum of gage is 829.18 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1967, water-stage recorder at same site and datum.

REMARKS.--No regulation. Many diversions above station for irrigation, mining, and logpond operation. Records include flow of Panther Creek.

AVERAGE DISCHARGE. -- 11 years, 2,335 ft<sup>3</sup>/s, 1,690,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 34.0 ft, from floodmark, from rating curve extended above 33,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 25.64 ft, and comparison of peak flows at station near Kerby and Rogue River near Agness; minimum, 61 ft<sup>3</sup>/s Aug. 28, Sept. 2, 1959.

	UNIHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1957-67		M.A			BABILITY RIOD OF R			OW
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	N CFS, FOI L, IN YEAI NCE PROBAI	RS, AND A	ANNUAL NO	DN-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	86	2732	584	809	1.39	2.1	1	73	67	64	62		
NOVEMBER	161	4490	2171	1206	•56	7.7	3	75	68	65	62		
DECEMBER	432	16430	4308	4404	1.02	15.3	7	76	68	65	62		
JANUARY	1115	9953	5264	3597	.68	18.7	14	77	70	66	63		
EBRUARY	2516	15010	5704	3599	.63	20.2	30	83	72	67	63		
MARCH	1340	7566	4272	1917	.45	15.1	60	96	82	75	69		
APRIL	1448	6776	3145	1532	.49	11.1	90	108	94	88	83		
MAY	764	4517	1820	1139	.63	6.4	120	132	110	101	96		
JUNE	328	915	561	191	.34	2.0	183	358	233	183	149		
JULY	120	267	188	47	.25	• 7							
AUGUST	65	130	105	20	. 19	.4							
SEPTEMBER	74	124	98	17	. 17	.3							
					07								
ANNUAL	1709	3735 	2335 	637	•27 	100							
MAGNIT	TUDE AND BASE	PROBABILI D ON PERIO	TY OF IN OD OF RE	STANTANE CORD 195	OUS PEAK F	FLOW	PERIOD	BAS	HARGE, II	BABILITY ( RIOD OF RE	ECORD 19R INDICATEARS, AND	957-67 ED RECUR	RENCE
MAGNITO	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF IN OD OF RE CATED RE	STANTANE CORD 195 CURRENCE	OUS PEAK F 7-67 INTERVAL IN PERCEI	FLOW , IN	PERIOD (CON-	BAS	HARGE, II	RIOD OF RE	ECORD 19R INDICATEARS, AND	957-67 ED RECUR	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 195 	OUS PEAK F 7-67 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU-	DISC	HARGE, II	RIOD OF RE N CFS, FOR VAL, IN YE NCE PROBAE	R INDICATEARS, AND	57-67 ED RECUR ANNUAL N PERCEN	RENCE
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## 14378200 ILLINOIS RIVER NEAR AGNESS, OR

LOCATION.--Lat 42°31'15", long 124°02'35", in SW±NW± sec.29, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100311, on right bank 0.6 mi downstream from Lawson Creek, 1.4 mi upstream from Fox Creek, 2.8 mi southeast of Agness, and at mile 3.0.

DRAINAGE AREA.--988 mi $^2$ , at cable section 2.1 mi downstream where all measurements are made.

PERIOD OF RECORD. -- October 1960 to September 1981.

16500

9770

7160

5570

4580

3810

2480

1520

833

437

337

280

237

202

173

GAGE.--Water-stage recorder. Datum of gage is 125.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Many diversions above station for irrigation, mining, and logpond operation. Records include flow of Fox Creek. All records given herein are for measuring site.

AVERAGE DISCHARGE.--21 years, 4,094 ft<sup>3</sup>/s, 56.27 in/yr, 2,966,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 225,000 ft<sup>3</sup>/s Dec. 22, 1964, estimated on basis of runoff ratio with station near Selma; maximum gage height, 56.91 ft Dec. 22, 1964, from floodmark (backwater from Rogue River); minimum discharge, 125 ft<sup>3</sup>/s Sept. 14-16, 1977.

MO	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1961-81		M.A				OF ANNUA RECORD 1		W
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICA EARS, AND BABILITY,	ANNUAL NO	-MC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	167	4696	816	999	1.22	1.7	1	161	138	127	120		
OVEMBER	339	23060	4953	4875	.98	10.1	3	162	139	128	120		
ECEMBER	262	26830	8833	5953	.67	17.9	7	165	140	129	121		
ANUARY	591	25660	10370	6730	.65	21.0	14	169	144	133	124		
EBRUARY	818	15420	7893	3680	•47	16.0	30	178	153	142	135		
IARCH	2187	14550	7369	4076	.55	15.0	60	200	168	154	145		
PRIL	1315	11750	4558	2326	-51	9.2	90	229	196	185	178		
IAY UME	1116	8195	2684	1808	•67	5.4	120	287	240	222	210		
UNE	510	1690	903	309	.34	1.8	183	611	451	388	344		
ULY UGUST	221	574 384	377 237	82 58	•22 •25	.8 .5							
EPTEMBER	131 149	1334	288	257	.89	.6							
CI ILMOLIN	149	1334	200	251	•09	•0							
NNUAL	800	7799	4094	4.67									
	TUDE AND		TY OF IN		.35  OUS PEAK F 1-81	100  FLOW				BABILITY	OF ANNUA	 L HIGH FL 961-81	
MAGNIT	FUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE	ISTANTANE CORD 196	OUS PEAK F	FLOW	PERIOD (CON-	BASI	ED ON PE HARGE, I	RIOD OF N CFS, F		961-81  TED RECUF D ANNUAL	RENCE
MAGNIT	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK F 1-81 INTERVAL, IN PERCEN	FLOW IN IT	PERIOD (CON- SECU-	BASI DISCI	HARGE, I INTER	RIOD OF N CFS, F VAL, IN NCE PROB	RECORD 1	961-81 TED RECUF D ANNUAL IN PERCEN	RENCE
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MAGNIT	FUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK F 1-81 INTERVAL, IN PERCEN	FLOW IN IT	PERIOD (CON- SECU- TIVE	BASI DISCI	HARGE, I INTER EXCEEDA	N CFS, F VAL, IN NCE PROB	RECORD 19 OR INDICA YEARS, AN ABILITY, 25	961-81 TED RECUF D ANNUAL IN PERCEN	RENCE
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MAGNIT ISCHARGE, YEARS, / 1.25 80%	FUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK F 1-81 INTERVAL, IN PERCEN	FLOW IN IT	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 62100 46700 31900 20700	HARGE, 1 INTER EXCEEDA 5 20% 95100 72000 49500 31000	N CFS, F VAL, IN NCE PROB 10 10% 	RECORD 1'	961-81 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
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MAGNITALISCHARGE, YEARS, A	FUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE BABILITY, 25 4%	OUS PEAK F 1-81 INTERVAL, IN PERCEN	FLOW IN IT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCI 2 50% 62100 46700 31900 20700 15700 15800	95100 72000 49500 31000 17400	N CFS, F VAL, IN NCE PROB 10, 10, 87300 60400 37200 24600 19400	RECORD 1'	961-81 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
MAGNIT I SCHARGE, YEARS, / 1.25 80%	FUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 196 CURRENCE BABILITY, 25 4\$	OUS PEAK F 1-81 INTERVAL, IN PERCEN 50 1 2%	IN NT 100 118	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50\$ 62100 46700 31900 15700 12800 10900	HARGE, I INTER EXCEEDA 5 20% 95100 72000 49500 31000 21700 17400 14500	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1'	TED RECUF D ANNUAL IN PERCEN 50 2%	100 13
MAGNIT SCHARGE, YEARS, A 1.25 80%	FUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 196 CURRENCE BABILITY, 25 4\$	OUS PEAK F 1-81 INTERVAL, IN PERCEN 50 1 2%	IN NT 100 118	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCI 2 50\$ 62100 46700 31900 15700 12800 10900	HARGE, I INTER EXCEEDA 5 20% 95100 72000 49500 31000 21700 17400 14500	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1'	TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
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## CHETCO RIVER BASIN

243

## 14400000 CHETCO RIVER NEAR BROOKINGS, OR

LOCATION.--Lat 42°07'25", long 124°11'10", in SE½ sec.12, T.40 S., R.13 W., Curry County, Hydrologic Unit 17100312, on right bank 16 ft upstream from bridge, 0.5 mi upstream from Elk Creek, 6.8 mi northeast of Brookings, and at mile 10.7.

DRAINAGE AREA .-- 271 mi2.

10100

6140

4290

3240

2530

2060

1330

757

397

218

168

129

104

70

PERIOD OF RECORD. -- October 1969 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 50 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--13 years, 2,320 ft<sup>3</sup>/s, 116.26 in/yr, 1,681,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,800 ft<sup>3</sup>/s Jan. 16, 1971, gage height, 27.45 ft; minimum, 45 ft<sup>3</sup>/s Oct. 21-23, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 22, 1964, reached a stage of 32.25 ft, from high-water mark on bridge pier, discharge, 85,400 ft<sup>3</sup>/s, from rating curve extended above 45,000 ft<sup>3</sup>/s.

М	ONTHLY AN	ID ANNUAL	MEAN DI	SCHARGES	1970-82		M/				OF ANNUA RECORD 1		)W
	MJNIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	61	2540	706	723	1.02	2.5	1	66	54	49	46		
NOVEMBER	229	10230	3656	3031	.83	13.1	3	67	54	50	47		
DECEMBER	121	12770	5615	3330	.59	20.1	. 7	68	55	50	47		
JANUARY	479	13150	5467	3161	.58	19.6	14	70	57	52	48		
FEBRUARY	619	8292	4215	2319	•55	15.1	30	75	61	55	51		
MARCH	1768	6830	3842	1955	.51	13.8	60	88	67	60	55		
APRIL	674	6956	2478	1649	•67	8.9	90	110	81	71	65		
MAY	430	2508	1040	599	-58	3.7	120	147	102	88	80		
JUNE	229	728	363	130	.36	1.3	183	327	211	165	133		
JULY	121	268	167	39	.23	•6							
AUGUST	75	231	115	53	.46	.4							
	61	1532	269	400	1.49	1.0							
SEPTEMBER	01	.,,,,											
ANNUAL	549 TUDE AND	3911			.39 OUS PEAK 0-82	100 FLOW	 MA				OF ANNUAL		 .OW
MAGNIT	549 FUDE AND BASE	3911 PROBABILI D ON PERI	ITY OF IN	NSTANTANE ECORD 197	0US PEAK 0-82	FLOW	PERIOD (CON-	BASI	HARGE, II	N CFS, FO		970-82 TED RECUR D ANNUAL	RENCE
DISCHARGE, YEARS, A	549  FUDE AND BASE  IN CFS, AND ANNUA	3911 PROBABILI D ON PERI FOR INDI	ITY OF IN IOD OF RE	NSTANTANE ECORD 197 ECURRENCE BABILITY,	OUS PEAK 0-82 INTERVAL IN PERCE	FLOW	PERIOD	BASI	HARGE, II	N CFS, FO	RECORD 19 OR INDICAT YEARS, AND	970-82 TED RECUR D ANNUAL	RENCE
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MAGNIT DISCHARGE, YEARS, A	549  FUDE AND BASE  IN CFS, AND ANNUA	3911 PROBABILI D ON PERI FOR INDI	ITY OF IN IOD OF RE	NSTANTANE ECORD 197 ECURRENCE BABILITY,	OUS PEAK 0-82 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	DISCI	HARGE, II	N CFS, FO	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1	970-82 FED RECUR O ANNUAL IN PERCEN	RENCE
MAGNIT DISCHARGE, YEARS, A	549  TUDE AND BASE  IN CFS, AND ANNUA  2 50%	3911 PROBABILID ON PERI	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 197 ECURRENCE BABILITY,	OUS PEAK 0-82 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE	DISCI	HARGE, II INTERI EXCEEDAI	N CFS, FO VAL, IN NCE PROBA	OR INDICAT YEARS, AND ABILITY, I	970-82 FED RECUR O ANNUAL IN PERCEN	RENCE T
MAGNITA DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, ND ANNUA  2  50\$	3911 PROBABILID ON PERI FOR INDI L EXCEEDA 5 20\$	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 197 ECURRENCE BABILITY, 25' 4%	OUS PEAK 0-82 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAN 5 20%	N CFS, FO WAL, IN N NCE PROB 10 10%	OR INDICAT YEARS, AND ABILITY, I	970-82 FED RECUR O ANNUAL IN PERCEN	RENCE T
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MAGNIT	TUDE AND BASE  IN CFS, ND ANNUA  2  50\$	3911 PROBABILID ON PERI FOR INDI L EXCEEDA 5 20\$	ITY OF IN IOD OF RE ICATED RE ANCE PROE	NSTANTANE ECORD 197 ECURRENCE BABILITY, 25' 4%	OUS PEAK 0-82 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 30200 22900 16700 11200 8870 7410	HARGE, II INTER' EXCEEDAN 5 20% 41400 32400 23200 15700 11800 9940	N CFS, FIVAL, IN NCE PROBATE 10 10% 10% 10% 10% 10% 10% 10% 10% 10%	DR INDICATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A	FO TO TO TO TO TO TO TO TO TO TO TO TO TO	100 1%
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MAGNITA DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, ND ANNUA  2  50\$	3911 PROBABILID ON PERI FOR INDI L EXCEEDA 5 20\$	ITY OF IN OD OF RE	STANTANE CORRENCE BABILITY, 25- 4%	OUS PEAK 0-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	30200 22900 16700 11200 8870 7410 6140	HARGE, II INTER'EXCEEDAN 5 20% 41400 32400 23200 115700 11800 9940 8140	10 OF IN CFS, FIVAL, IN NICE PROBI	DR INDICATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A STATE AND A	FED RECURD ANNUAL IN PERCEN	100 1%
MAGNITA DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE  IN CFS, ND ANNUA  2  50\$	3911 PROBABIL ON PERI FOR INDI L EXCEEDA 5 20%528	ITY OF IN OD OF RE	NSTANTANE CORD 197 CCURRENCE SABILITY, 25- 4% 77500	OUS PEAK 0-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	30200 22900 16700 11200 8870 7410 6140	HARGE, III INTER' EXCEEDAN  41400 32400 23200 115700 11800 9940 8140 DRD 1970-	100 OF IN CFS, FIVAL, IN NOCE PROB. 10 10\$ 47000 37900 26600 13200 11000 8910 8910	DR INDICAT YEARS, AND ABILITY, 1 25 4% 52400 43800 30100 21300 14400 11800 9500	FED RECURD ANNUAL IN PERCEN	100 1%

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STATION	NO. STATION NAME	PAGE
14306500 14169300		155 71
14366000	Applegate River near Applegate	228
14362000		226
14363000	., •	227
14369500	Applegate River near Wilderville	230
14357500	Bear Creek at Medford	223
14248700		141
14337500	<b>5</b>	210
14306900	<b>y</b>	160
14138800		17
14162200		62
14161100	· · · · · · · · · · · · · · · · · · ·	59
14162000		61
14179000		81
14139500		20
14138850		18
14201500	Butte Creek at Monitor	117
14172000	,	77
14172000	· · · · · · · · · · · · · · · · · · ·	76
14320700	•	188
14139700	5	21
14400000	<b>y</b>	243
14209500	=/	135
14208000		130
14210000	Clackamas River at Estacada:  Before the construction of North Fork Dam	136
	After the completion of North Fork Dam	137
14211000		138
14152500		41
14157000		48
14153500		42
14157500		49
14309000		169
14310000	Cow Creek near Riddle	171
14167000		70
14308700	Days Creek at Days Creek	168
14377500	,	240
14312200		177
14306810		159
14306600		156

STATION NO	STATION NAME	PAGE
14353500 14205500 14372500 14322000 14308500 14338000 14350000	East Fork Ashland Creek near Ashland East Fork Dairy Creek at Mountaindale East Fork Illinois River near Takilma Elk Creek near Drain Elk Creek near Drew Elk Creek near Trail Emigrant Creek near Ashland: Before Green Springs powerplant diversion	222 125 134 190 167 212
	After Green Springs powerplant diversion	220
14151000 14150300 14306400 14306800	Fall Creek below Winberry Creek, near Fall Creek Before construction of Fall Creek Dam	37 38 35 154 158
14204500 14204000 14163000 14371500	Gales Creek near Forest Grove	124 123 65 232
14195000 14144900	Haskins Creek near McMinnville	109 25
14377000 14378200 14377100 14378000 14331000	Illinois River at Kerby Illinois River near Agness Illinois River near Kerby Illinois River near Selma Imnaha Creek near Prospect	238 242 239 241 204
14307700 14211500	Jackson Creek near Tiller	165 139
14307500 14387580 14312500 14151500 14182500 14318000 14141500 14131000	Lake Creek at Triangle Lake Lake Creek near Deadwood Lake Creek near Diamond Lake Little Fall Creek near Fall Creek Little North Santiam River near Mehama Little River at Peel Little Sandy River near Bull Run Little Zigzag River at Twin Bridges, near Rhododendron Long Tom River at Monroe:	161 162 178 39 84 184 22
14170000	Before construction of Fern Ridge Dam	72 73
14166500 14311500 14161500	Long Tom River near Noti  Lookingglass Creek at Brockway  Lookout Creek near Blue River	69 175 60

STATION NO	. STATION NAME	PAGE
14190000 14189500 14190500	Luckiamute River at Pedee	99 98 100
14171000 14206000 14159000	Marys River near Philomath	75 126
14158500	Before the construction of Smith River Dam	54 55 51
14158850 14165500 14165000	McKenzie River below Trail Bridge Dam, near Belknap Springs McKenzie River near Coburg	53 67
	Before the construction of Smith River, Cougar, and Blue River dams	63
14326500 14333000 14145500	River dams	64 197 205
	Before the construction of Hills Creek Dam  After the completion of Hills Creek Dam	26 27
14152000 14148000	Middle Fork Willamette River at Jasper	40
	Before the construction of Hills Creek Dam	32 33
14150000	Middle Fork Willamette River near Dexter	34
14144800	Middle Fork Willamette River near Oakridge	24
14186500	Middle Santiam River at mouth, near Foster	91
14185800 14186000	Middle Santiam River near Cascadia	88 90
14306036	Mill Creek near Toledo	152
14193300	Mill Creek near Willamina	106
14165000 14198500	Mohawk River near Springfield	66
14190000	Mollala River above Pine Creek, near Wilhoit  Molalla River near Canby	113 114
14156500	Mosby Creek at mouth, near Cottage Grove	47
14156000	Mosby Creek near Cottage Grove	46
14306700	Needle Branch near Salado	157
14301000	Nehalem River near Foss	144
14303600	Nestucca River near Beaver	149
14302900 14303000	Nestucca River near Fairdale	147 148
14306100	North Fork Alsea River at Alsea	153
14138900	North Fork Bull Run River near Multnomah Falls	19
14326800	North Fork Coquille River near Fairview	198
14327000 14342500	North Fork Coquille River near Myrtle Point North Fork Little Butte Creek at Fish Lake, near Lakecreek.	199 217
エチフチムフひひ	norm fork title butte creek at FISH Lake, hear Lakecreek.	411

STATION NO	STATION NAME	PAGE
14343000	North Fork Little Butte Creek near Lakecreek	218
14147500	North Fork of Middle Fork Willamette River near Oakridge	31
14307645	North Fork Siuslaw River near MINERVA	164
14311000	North Myrtle Creek near Myrtle Creek	173
14183000	North Santiam River at Mehama:	
	Before the construction of Detroit and Big Cliff dams	
	After the completion of Detroit and Big Cliff dams	86
14181500	North Santiam River at Niagara:	
	Before the construction of Detroit and Big Cliff dams	82
	After the completion of Detroit and Big Cliff dams	83
14178000	North Santiam River below Boulder Creek, near Detroit	80
14316500	North Umpqua River above Copeland Creek, near Toketee Falls	180 182
14317500	North Umpqua River above Rock Creek, near Glide	179
14315500 14319500	North Umpqua River at Toketee Falls	187
14319500	North Umpqua River near Glide	185
14197000	North Yamhill River at Pike	111
14194300	North Yamhill River near Fairdale	108
14196500	North Yamhill River near Pike	110
,0500	No. 711 January F. Maria Hadi F. Maria	
14209000	Oak Grove Fork above powerplant intake:	
. ,	Before regulation by Timothy Lake	133
	After regulation by Timothy Lake	134
14208500	Oak Grove Fork at Timothy Meadows	131
14208700	Oak Grove Fork near Government Camp	132
14311200	Olalla Creek near Tenmile	174
14368500	Powell Creek near Williams	229
14202000	Pudding River at Aurora	118
14201000	Pudding River near Mount Angel	116
14185900	Quartzville Creek near Cascadia	89
14100900	Qualifizative Greek Hear Cascadia	09
14333500	Red Blanket Creek near Prospect	206
14190700	Rickreall Creek near Dallas	101
14317600	Rock Creek near Glide	183
14170500	Rock Creek near Philomath	74
14327500	Rogue River above Bybee Creek, near Union Creek	200
14328000	Rogue River above Prospect	201
14339000	Rogue River at Dodge Bridge, near Eagle Point	213
14361500	Rogue River at Grants Pass	225
14359000	Rogue River at Raygold, near Central Point	224
14330000	Rogue River below Prospect	202
14335000	Rogue River below South Fork Rogue River, near Prospect	208
14372300	Rogue River near Agness	233
14337600	Rogue River near McLeod	211

STATION 1	NO. STATION NAME	PAGE
14154500 14155500	Row River above Pitcher Creek, near Dorena	43
	Before the construction of Dorena Dam	44 45
14146500	Salmon Creek near Oakridge	<b>2</b> 9
14135500	Salmon River above Boulder Creek, near Brightwood	15 14
14135000 14134500	Salmon River at Welches	13
14134000	Salmon River near Government Camp	12
14146000	Salt Creek near Oakridge	28
14142500	Sandy River below Bull Run River, near Bull Run	23
14137000	Sandy River near Marmot	16
14189000	Santiam River at Jefferson:	96
	Before the construction of three upstream dams	97
14203000	Scoggins Creek near Gaston	121
14305500	Siletz River at Siletz	150
14200300	Silver Creek at Silverton	115
14307620 14370000	Siuslaw River near Mapleton	163 231
14158790	Smith River above Smith River Reservoir, near Belknap Spgs.	52
14335500	South Fork Big Butte Creek near Butte Falls	209
14324600	South Fork Coquille River above Panther Creek, near Illahe.	193
14325000	South Fork Coquille River at Powers	196
14324700 14324900	South Fork Coquille River near Illahe	194 195
14324900	South Fork Coquille River near Powers	214
14341500	South Fork Little Butte Creek near Lakecreek:	2
	Before diversion in Dead Indian Collection Canal	215
	After diversion in Dead Indian Collection Canal	216
14159200	South Fork McKenzie River above Cougar Lake, near Rainbow.	56
14159500	South Fork McKenzie River near Rainbow:	57
	Before the construction of Cougar Dam	58
14330500	South Fork Rogue River above Imnaha Creek, near Prospect	203
14334700	South Fork Rogue River, south of Prospect	207
14310700	South Myrtle Creek near Myrtle Creek	172
14187500	South Santiam River at Waterloo:	
	Before construction of Green Peter and Foster dams	93
14185000	After completion of Green Peter and Foster dams  South Santiam River below Cascadia	94 87
14165000	South Umpqua River at Tiller	166
14312000	South Umpqua River near Brockway	176
14194000	South Yamhill River near Whiteson	107
14192500	South Yamhill River near Willamina	104

STATION NO.	STATION NAME	PAGE
14316700	Steamboat Creek near Glide	181
14375100	Sucker Creek below Little Grayback Creek, near Holland	236
14375000	Sucker Creek near Holland	235
14319200	Sutherlin Creek at Sutherlin	186
14323200	Tenmile Creek near Lakeside	191
14188800	Thomas Creek near Scio	95
14302500	Trask River near Tillamook	146
14206500	Tualatin River at Farmington	127
14207500	Tualatin River at West Linn:  Excluding flow in Oswego Canal	128
	Including flow in Oswego Canal	129
14203500	Tualatin River near Dilley	122
14202500	Tualatin River near Gaston:	
	Before Hillsboro water-supply diversion	119
	After Hillsboro water-supply diversion	120
14321000	Umpqua River near Elkton	189
14147000	Waldo Lake Outlet near Oakridge	30
14353000	West Fork Ashland Creek near Ashland	221
14309500	West Fork Cow Creek near Glendale	170
14375500	West Fork Illinois River below Rock Creek, near O°Brien	237
14324500	West Fork Millicoma River near Allegany	192
14187000	Wiley Creek near Foster	92
14174000	Willamette River at Albany:	
	Before the construction of nine upstream reservoirs	78
	After the completion of nine upstream reservoirs	79
14166000	Willamette River at Harrisburg	68
14211700	Willamette River at Portland	140
14191000	Willamette River at Salem:	400
	Before the construction of twelve upstream reservoirs	102
1.4450000	After the completion of twelve upstream reservoirs	103
14158000	Willamette River at Springfield	50
14198000 14193900	Willamette River at Wilsonville	112
		105
14301500 14150800	Wilson River near Tillamook	145 36
14170000	willbeil y creek hear Lowell	50
14306030 14251500	Yaquina River near Chitwood	151
14421200		140
	Before water-supply diversion	142 143
	7.1.1C1 WG 1C1 TSUUULV ULVELSTUL **********************	14)